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Carrington Kung

Superimposed on the exceedingly serious nation-wide strike situation are further complications affecting tidelands drilling.

Although a few members of Congress howled for U. S. seizure of tidelands oil deposits, legislation securing State ownership of all lands lying between the high water mark and the maritime limit last month passed the House by the thumping majority of 108 to 11. Swift approval of the tidelands bill by the Senate seemed assured at that time, with Chairman McCarran (D., Nev.) of the tidelands subcommittee of the Senate Judiciary Committee planning to report out his companion bill.

California oil men therefore were startled when it became known the Department of Justice has under consideration the long-threatened U. S. Supreme Court suit challenging State ownership of the tidelands. Whether the action will be directed at the State of California or will apply to coastal States throughout the country is not yet decided.

Another shock came Sept. 28 with issuance by President Truman of a Presidential Proclamation asserting U. S. jurisdiction over oil resources of the Continental Shelf. While Federal officials insist the policy "does not touch upon the question of Federal vs. State control", oil-wise individuals feel it is—at the least—an extraordinary coincidence for this question of the ownership of "oil under the high seas" to bob up at the time when the States are working to prove their rights to minerals underlying the tidewaters within their boundaries.

Fuel has been added to the fires of the tidelands ownership problem by a barrage of newspaper criticism —principally from the formerly-staid Washington Post.

To explain the background of the attack, it might be well to delve into the background of the House opposition presented when the tidelands bill finally reached the floor of the Lower Chamber for passage. CALIFORNIA OIL WORLD, unfortunately, was on the verge of going to press when the argument took place and, therefore, the Washington Bureau was compelled to wire only the scantiest details of the House debate.

Worthy of note, perhaps, is the manner in which California's Jerry Voorhis, San Dimas Democrat, denounced and berated the California oil industry and — later — "edited" his remarks so that some of the more pertinent did not appear in the Congressional Record. His references to "paltry royalties" collected by the States for oil "drained from these lands by private companies" remained, however, as did his charge that the States had not "successfully or effectively protected the public interests of the American people in those oil resources."

Meanwhile, Rep. Sam Hobbs, Democrat of Alabama and chief House sponsor of "oil grab" legislation in 1939, offered an amendment to the quitclaim bill which would have reserved to the U. S. the oil found in the tidelands. Hobbs charged the resolution he offered six years ago was to "stop Japan and her 16 tankers from taking 156,000 barrels of oil a day from off the shores of California where there is the biggest deposit of oil ever known in the history of the world, $4,000,000,000 (4 billions) worth."

"We threshed the matter out at length, but Japan went on and secured their stock of oil to wage her part of the global war just ended," Hobbs told the House.

All this was very interesting to oil men who read the remarks in the Congressional Record. As far as anyone knows, tidelands production in California has not yet reached 63,000 B/D, and was far less in the pre-war years. Also, no tidelands oil was ever shipped to Japan, in the memory of California oil men who presumably would know.

The brisk preliminaries in the House barely foreshadowed later developments. A sudden surge of opposition in the newspapers — in which the tidelands measure, supported by all but two States in the U. S. was referred to as "another Teapot Dome"—appeared directed at the Senate, which then was expected to consider the tidelands measure in the near future.

Impact of the Presidential Proc-

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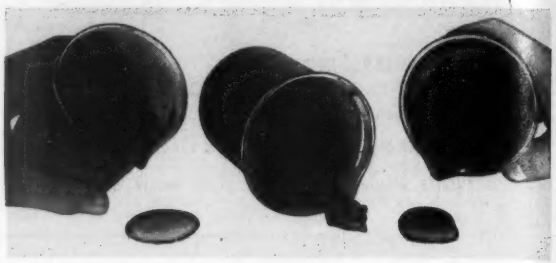

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lamation on U. S. ownership of oil underlying the Continental Shelf, at and beyond the 100-fathom mark which zigzags at various distances from the shore, was felt among the supporters of the tidelands bill. Particularly alarming to the bill's proponents was the fact the proclamation was issued at the insistence of Secretary of Interior Ickes.

An accompanying Executive Order, placing administration of the subsoil and sea bed of the shelf (including, of course, such oil deposits as may be found) "under the jurisdiction and control of the Secretary of the Interior", did nothing to dispel the suspicion of the oil industry that this newest step toward Federal Control eventually would cause complications in the tidelands fight. . . . This even though the Presidential decree stressed that no issues "between the United States and the several States" would be affected by either the order or the proclamation.

Discovery that the Justice Department actually is considering action against the State of California or other coastal states did nothing to clear the atmosphere. Possibility of a Federal suit reportedly pleased Sen. Burton K. Wheeler (D., of Kentucky) and certain other members of Congress who are said to be behind the sudden stiffening of opposition against the tidelands bill.

Decision to hold hearings on the tidelands matter in the Senate Judiciary Committee came after a cable from London in which Ickes—involved in discussions with the British over the Anglo-American oil treaty—requested an opportunity to be heard by the McCarran subcommittee. At a meeting of the full Judiciary Committee, Oct. 1, it was agreed to hold hearings late in November, CALIFORNIA OIL WORLD was advised. . . . The subcommittee earlier had approved unanimously a suggestion to report out the McCarran tidelands measure.

The suit against the State of California possibly may be brought before the Senate hearings, Justice Department spokesmen have stated. This would have its effect on the Senate proceedings.

All these developments have bewildered observers who believed the tidelands legislation would have smooth sailing after House passage. The political implications cannot be overlooked. The determination of Ickes to take the stand against the bill and the persistence of the Interior Department in urging a Federal suit indicate a desperate battle will be put up to wrest the tidelands from the respective states. Newspaper columnists have made much capital of the fact that three high Administration figures can be badly embarrassed by the outcome of the tidelands struggle—namely, President Truman, Atty. Gen. Clark and Ed Pauley.

If the bill passes—and few believe it will not—a Presidential veto will be virtually demanded by Ickes and his friends. Some people think a veto will be forthcoming. Others point out (in the event of a Federal suit) the President might be justified in calling attention to the fact he has already given Ickes what he wanted by directing the Justice Department to bring suit; that Congress has spoken and that he cannot in all conscience override the decision of that body.

Clark, a Texan, cannot be very happy about instituting a court action which will affect the Texas oil industry in which he has many good friends. Pauley—close friend of the President and Mr. Truman's "personal" Ambassador — already has been made the whipping-boy in the tidelands fight in newsstories pointing the finger at him for his operations in the California submerged oil lands. The Los Angeles oil man also was attacked during House debate on the tidelands bill by Rep. Charles M. LaFollette (R., Ind.) who said he found a "unique coincidence" in Pauley's rise in Democratic politics, the removal of former Atty. Gen. Francis Biddle and the naming of Tom Clark to Biddle's place.

Clinching of the Anglo-American oil agreement in London was effected Sept. 24 with a minimum of exertion. Due back in Washington within the next few days are Petroleum Administrator Ickes and Deputy Petroleum Administrator Ralph K. Davies, after a brief European tour which followed successful negotiation of the petroleum treaty.

Approval of the pact by both Governments is regarded here as a ray of light in the otherwise dark postwar picture of international cooperation. Tailored to eliminate ambiguities which U. S. oil men feared would result in Government interference with domestic operations, the revised document is expected to be ratified without difficulty. The Senate Foreign Relations committee, which blocked consideration of the original treaty last year, is expected to report the new version favorably, with approval by the Senate considered certain.

The oil treaty (text of which appears elsewhere in this issue) provides for cooperation between the U. S. and Great Britain and agreement by the two countries that "the international petroleum trade in all its aspects should be conducted in an orderly manner on a world-wide basis". Formation of an International Petroleum Council and eventual multilateral agreements with other oil-producing and consuming countries also were agreed upon.

Other members of the American delegation included Charles B. Rayner, petroleum adviser to the State Department; William R. Boyd, Jr., president of the American Petroleum Institute and chairman of the Petroleum Industry War Council; A. Jacobsen, president of Amerada Petroleum Corp. and chairman of PIWC's National Oil Policy Committee; George A. Hill, Jr., president of Houston Oil Co.; Alton Jones, president of Cities Service; Joseph E. Pogue, vice president of Chase National Bank, and Ralph T. Zook, president of the Independent Petroleum Association of America.

Interesting is the attitude taken by the IPAA on the new agreement. The treaty appears "greatly useful in the establishment of a better understanding" between the U. S. and Great Britain, according to Russell B. Brown, general counsel of the independents' organization. It also "appears to prevent the establishment of cartels" and to safeguard the possibility of its use, as a treaty, to "preclude action by Congress on imports of oil".

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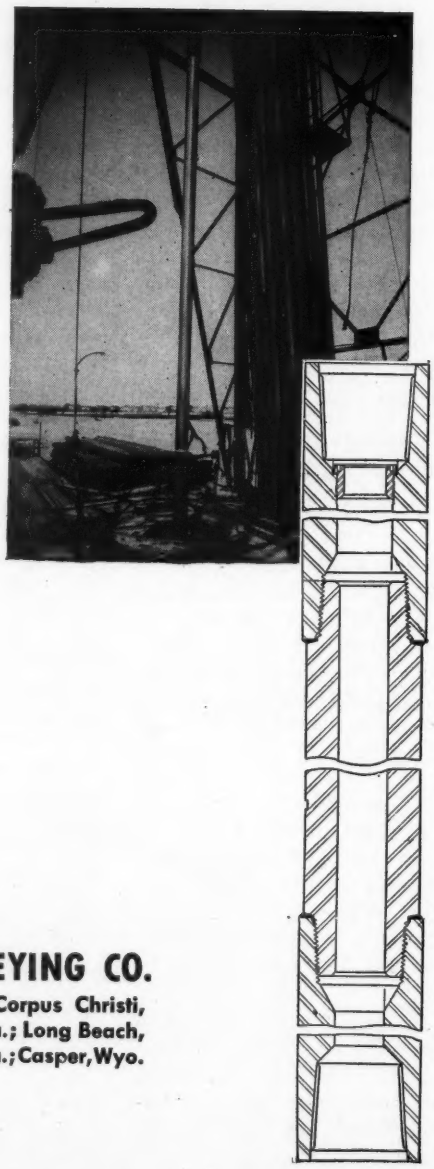

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Justice Department maneuvers in the threatened anti-trust suit against the API, the major oil companies and their subsidiaries, are obscure at this writing—although the best information available is that nothing has yet been decided.

Rumors persist, however, that renegotiation of a consent decree will not be attempted and that the Department may move soon to start a new action.

Anglo-American Oil Agreement

Text of Agreement is as follows:

Preamble: The Government of the United States of America and the Government of the United Kingdom of Great Britain and Northern Ireland, whose Nationals hold, to a substantial extent jointly, rights to explore and develop petroleum resources in other countries, recognize:

1. That ample supplies of petroleum, available in international trade to meet increasing market demands, are essential for both the security and economic wellbeing of nations;

2. That for the foreseeable future the petroleum resources of the world are adequate to assure the availability of such supplies;

3. That the prosperity and security of all nations require the efficient and orderly development of the international petroleum trade;

4. That the orderly development of the international petroleum trade can best be promoted by international agreement among all countries interested in the petroleum trade, whether as producers or consumers.

The two Governments have therefore decided, as a preliminary measure to the calling of an international conference to consider the negotiation of a multilateral petroleum agreement, to conclude the following agreement.

Article I:

The signatory Governments agree that the international petroleum trade in all its aspects should be conducted in an orderly manner on a worldwide basis with due regard to the considerations set forth in the preamble, and within the framework of applicable laws and concession contracts, to this end and subject always to considerations of military security and to the provisions of such arrangements for the preservation of peace and prevention of aggression as may be in force, the signatory Governments affirm the following general principles with respect to the international petroleum trade:

(a) That adequate supplies of petroleum, which shall in this agreement mean crude petroleum and its derivatives, should be accessible in international trade to the Nationals of all countries on a competitive and nondiscriminatory basis;

(b) That, in making supplies of petroleum thus accessible in international trade, the interests of producing countries should be safeguarded with a view to their economic advancement.

Article II:

In furtherance of the purposes of this agreement, the signatory Governments will so direct their efforts:

(a) That all valid concession contracts and lawfully acquired rights shall be respected and that there shall be no interference directly or indirectly with such contracts or rights;

(b) That with regard to the acquisition of exploration and development rights the principle of equal opportunity shall be respected;

(c) That the exploration for and development of petroleum resources, the construction and operation of refineries and other facilities, and the distribution of petroleum shall not be hampered by restrictions inconsistent with the purposes of this agreement.

Article III:

1. With a view to the wider adoption of the principles embodied in this agreement, the signatory governments agree that as soon as practicable they will propose to the governments of all interested producing and consuming countries the negotiation of an international petroleum agreement which inter-alia would establish a permanent international petroleum council.

2. To this end the signatory governments agree to formulate at an early date plans for an international conference to negotiate such a multilateral petroleum agreement. They will consult together and with other interested governments with a view to taking whatever action is necessary to prepare for the proposed conference.

Article IV:

1. Numerous problems of joint immediate interest to the signatory government with respect to the international petroleum trade should be discussed and resolved on a cooperative interim basis if the general petroleum supply situation is not to deteriorate.

2. With this end in view, the signatory governments agree to establish an international petroleum commission to be composed of six members, three members to be appointed immediately by each government. To enable the commission to maintain close contact with the operations of the petroleum industry, the signatory governments will facilitate full and adequate consultation with their nationals engaged in the petroleum industry.

3. In furtherance of and in accordance with the purposes of this agreement, the commission shall consider problems of mutual interest to the signatory governments and their nationals, and with a view to the equitable dispostion of such problems it shall be charged with the following duties and responsibilities:

(a) to study the problems of the international petroleum trade caused by dislocations resulting from war;

(b) to study past and current trends in the international petroleum trade;

(c) to study the effects of changing technology upon the industrial petroleum trade;

(d) to prepare periodic estimates of world demands for petroleum and of the supplies available for meeting the demands, and to report as to means by which such demands and supplies may be correlated so as to further the efficient and orderly conduct of the international petroleum trade;

(e) to make such additional reports as may be appropriate for achieving the purposes of this agreement and for the broader general understanding of the problems of the international petroleum trade.

4. The Commission shall have power to regulate its procedure and

(Continued on Page 14)

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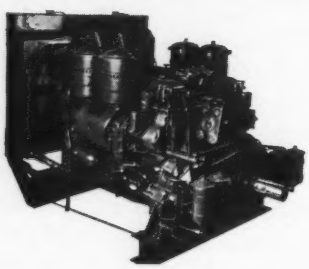
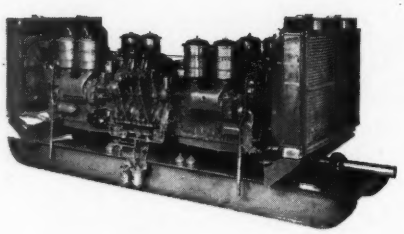


The "Twin" engine which powered the M-4 Tanks and M-10 Tank Destroyers in war time becomes a light weight powerful "twin" engine for drilling rigs and mud pumps in peace time.



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Installation Design to Facilitate Deep Drilling With Combined-Power Operation

Utilizing both purchased electric current and diesel power, one oil company of California has developed an installation of surface equipment that will insure continuous service, provide flexibility of operation and increase the safety factor during the drilling of an exploratory well that may go to record depth if complete testing of the formations so require. At the time of writing the well is drilling below 2000 feet with surface pipe still on the rack ready to be run when the landing point is reached. The well is located in the Bandini area southeast of Los Angeles and northwest of the Santa Fe Springs field.

While none of the equipment on this rig is, or is expected to be, of special design, much of it having been employed on previously drilled wells, the selection and arrangement of the parts making up the surface plant are of interest. The installation has been designed for deep drilling and gives an impression of permanence. Surrounding the cellar and approximately four feet below ground level is a concrete mat covering the area below the derrick floor and engine house. On this rests a steel substructure supporting a unitized rig and the flooring above; on this concrete foundation also rest the legs of the derrick. Entrance to this area under the derrick is by stairway and provides unobstructed access to the deeper cellar beneath the well head. An extended area around the well has been cleared and surfaced with road material and every provision has been made to facilitate delivery of equipment and materials to the rig. This provision for extensive operation is clearly indicated in the accompanying photograph of the derrick which was taken before the finishing touches had been completed.

Electric power is being used for the drawworks, two pumps, a standby hoist and auxiliary equipment; diesel engines drive the main circulating mud pump and can take over the stand-by unit in case of the electric current going off, an event that must be anticipated although it may seldom occur.

The main mud pump is 7¾x16 power pump driven by two 8-cylinder diesel engines of 126 hp each. This pump is used for drilling fluid circulation at all times and provides a safety factor if the electric power goes off. The rotary machine is driven through on drawworks which is powered by two 125 hp 440-volt electric motors and thus, in case of an electric power shut-down, rotation would be stopped. Since the mud pump is operated by diesel power, circulation can be maintained during the time rotation is interrupted; and should it be desired to raise the bit off bottom or pull it completely out of the hole at any time while rotation is impossible, the stand-by hoist can be used for the purpose. The stand-by unit is ordinarily driven by a 25-65 electric motor but can be switched over to operation by a 6-cylinder, 125 hp diesel engine. This transfer is accomplished by merely switching the drive chain on the stand-by hoist which is driven through reduction gears by either of the driving units.

One of the two electric driven

The Ideco derrick with two runarounds is 196 feet in height.

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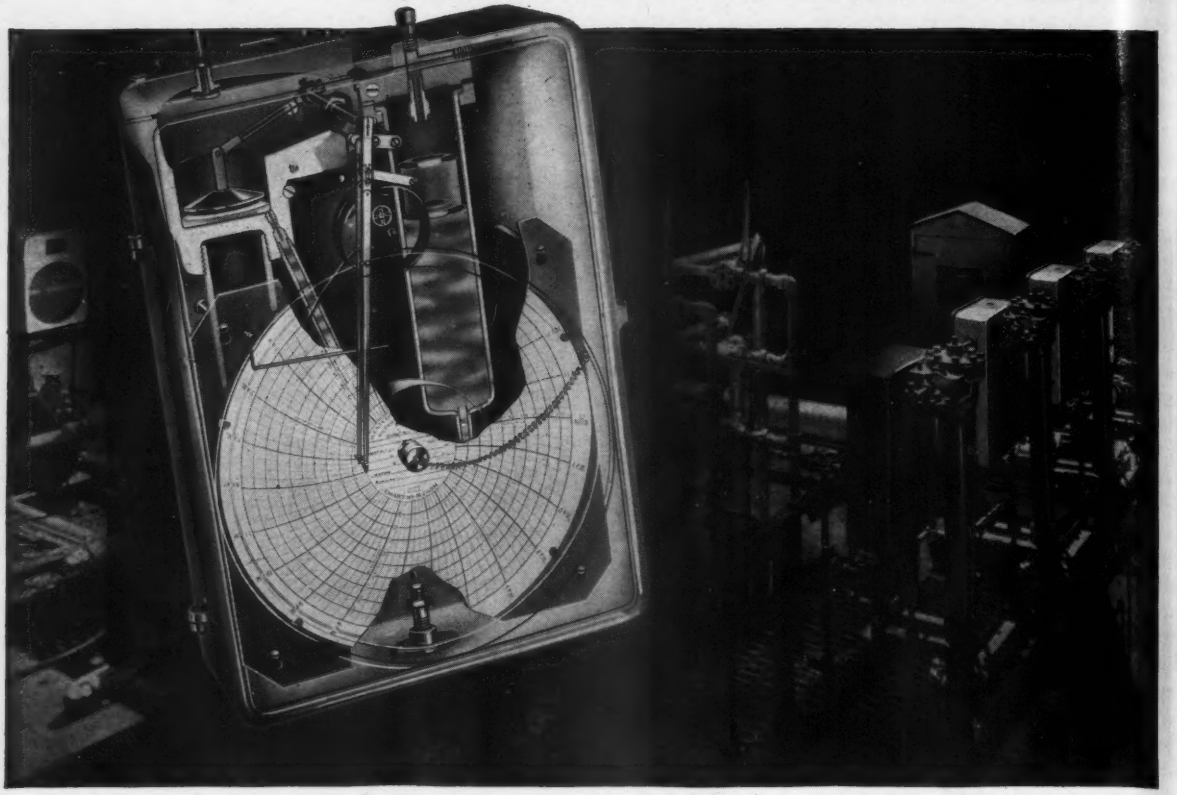

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The Corwin-Vernon de-sander is here shown.

this becomes necessary and mud testing equipment has been installed for this purpose.

Two cellar control gates and a spool-type landing head will be installed when the surface string has been set. One gate will be equipped with rams for closing around pipe and the other with rams for complete closure of the hole when pipe and tools are out. Each of these gates will be opened and closed by remote control through a lazy rod (torque tube) which will be operated by an electric motor. Closing will thus be by push button and when the gate is closed the motor automatically switches off. Each gate will have its own motor and individual push button.

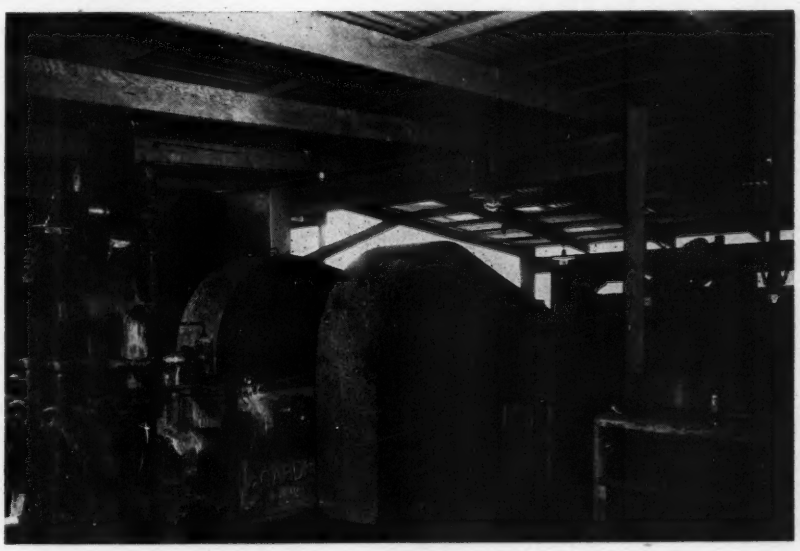
The derrick is a steel derrick 178 feet in height with 32-foot base. The 178 foot height is above ground level but the bottom of the legs are 4 feet below ground, resting on the concrete foundation as mentioned above. A 16-foot gin pole makes the total height of the structure 196 feet above ground.

As can be seen in the illustrations, two runaround platforms have been installed on the derrick. The upper one is for handling 5-inch drill pipe which is pulled in stands of three doubles each. These doubles average 44 feet in length and thus make average stands of 132 feet. The distance of the runaround above ground is 128 feet. The lower plat-

(Continued on Page 14)

pumps is a 7½x14 stand-by powered by a 125 hp motor. The other is a 6¾x14 utility pump driven by a 20-50 electric motor and used ordinarily for mixing mud and performing other pumping jobs around the rig. All pumps, both diesel driven and electric, can be run in tandem and are expected to insure whatever pressure and volume of mud fluid may be necessary under any conditions encountered during drilling operations, even at great depth.

The mud circulating system is equipped with a de-sander as shown in the accompanying illustrations. At the present time only one shaker screen is in service but another one will be installed after the surface pipe is run and cemented. Mud control will be provided by weight material and other admixtures when



A 7¾ x 16 Gardner-Denver mud pump is powered by two Caterpillar 8-cylinder, 126 hp diesel engines which can be seen in the right background.

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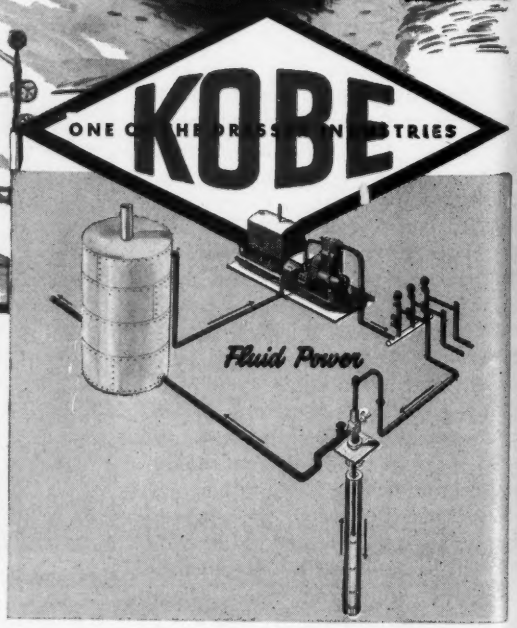

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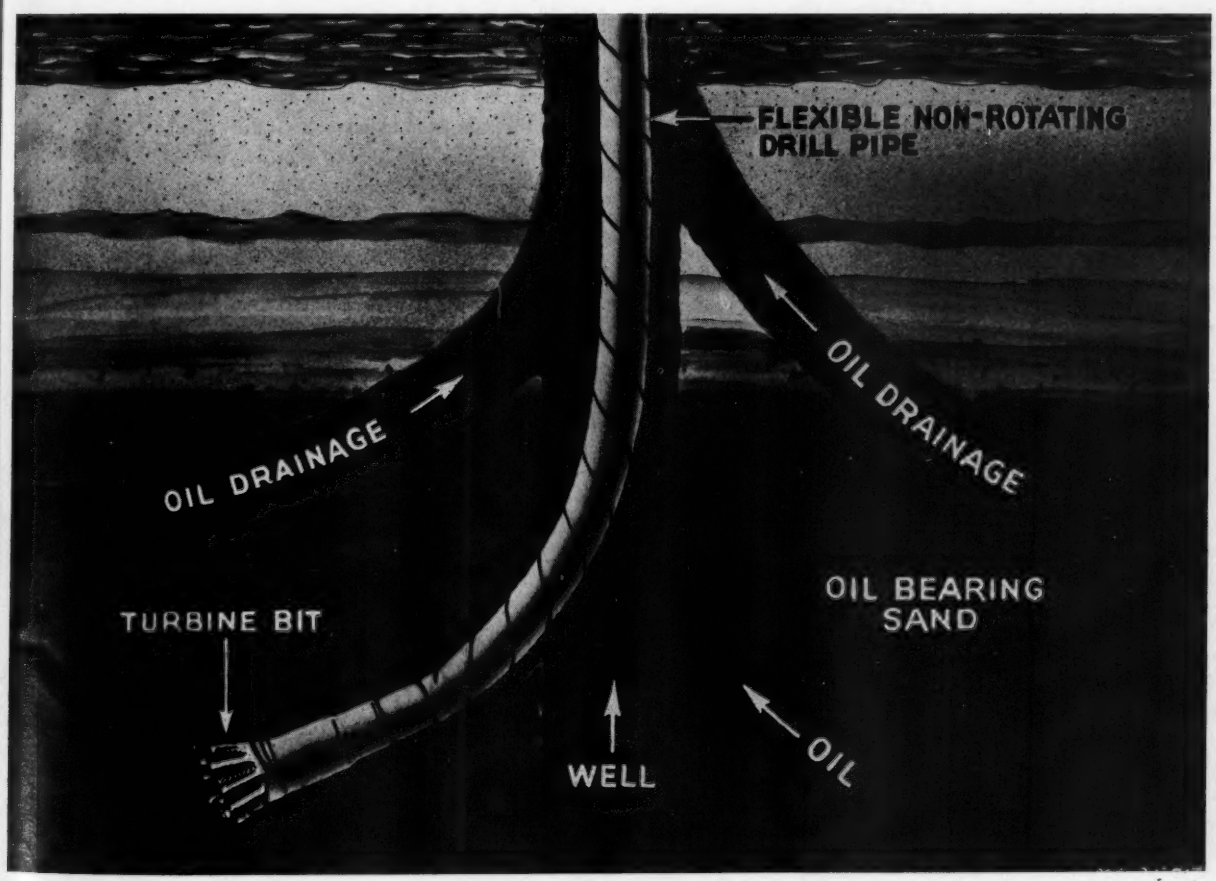
Horizontal Holes Drilled From a Vertical Well

Studies of the flow of fluids in sands, examinations of vast amounts of empirical data and the general experience of production men have all substantiated the accepted conclusion that a large percentage of oil is left in the productive formation when a well has declined in production to the point where it can no longer be produced economically. This means that great quantities of oil that should be recoverable will be left in the sand unless some means of causing it to flow to the bore of the well are taken. Better production technique is getting more of this oil than formerly and secondary recovery methods are becoming more highly developed with increasingly effective results. A method for tapping the oil sand at distances from the bore of a well and providing a passage for the flow of oil through horizontal holes to the vertical well has recently been tested. The results achieved by this procedure make it of interest to production men because it presents possibilities as another means of increasing production from an old field and of obtaining profitable production from wells that have been shut in because their production was too small in volume. Although no horizontal drilling has yet been done in new wells, speculations can be made on the possibilities of increasing the immediate production from such wells and on how horizontal holes may be of aid in secondary recovery operations.

Considering only the rejuvenation of old wells, horizontal drilling* consists of drilling one or more holes horizontally from the vertical bore of a well and through the productive sand to a desired distance from the well. Every oil well has an assumed drainage area but how much of the total oil content in that area actually reaches the bore is not known. The flow of the oil through the sand is governed by such natural factors as permeability, porosity, cementation of the grains, the gas content of the fluid, where the gas is located stratigraphically, and the driving force moving the oil. Water infiltration and plastered faces of the sand when improper drilling mud is used and sloughing sand from some formations retard the flow of oil into the well at the start. As the well gets older, additional retarding factors may appear, both in the sand itself and at the face of the hole. Fine grains may clog the pores of the sand, sloughing sand may deposit in the hole or around the liner, and residual matter may be formed from the oil itself. The object of the horizontal holes is to provide unobstructed drain holes to the bore, the drain holes themselves taking the liquid from the surrounding bodies of sand they penetrate.

The drain holes are drilled to ex-



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A flying boxcar took off the other day from Salinas, California, headed for Cleveland, Ohio. Loaded with strawberries, lettuce, peaches, nectarines and plums, it flew through a test tube more than 2,000 miles long.

For this was the first of a three months' series of experimental flights to find out what's what about shipment of perishable farm produce by airplane — about putting good things fresh with western dew upon the breakfast tables of the East.

Everybody has long considered such service a certainty of the future. We believe it can be done today. Hence we're co-operating with Ralph E. Myers, one of the world's largest produce operators, in a test to discover the economic and operational "bugs"—and get rid of them.

We are fueling with 100 octane gasoline a four-motored Consolidated Vultee sky freighter, dubbed the "City of Salinas" and operated by American Airlines, which is plying for an unprecedented three months' test period between California growing centers and such distance markets as New York, Cleveland, Detroit, Chicago and Philadelphia—reducing days to hours along the way.

Thus Standard of California is again sharing in a forward step of commercial aviation, something which has become a habit since those days of the '20's when we flew one of the first transport planes through the West—as a pioneering venture to demonstrate its practicability.

Over the years we've helped with airplane beacons on dangerous peaks. We've helped with hundreds of roof-top airway signs. And, all along, we've helped through the scientific development of oils and fuels. Now, once more, we're helping usher in an aviation tomorrow.

STANDARD OF CALIFORNIA

E flag with 4 stars,
awarded to our Richmond Refinery

tend radially from the vertical well as indicated in Fig. 1. Four such holes should probably be the minimum number under usual conditions and they may be directed in a predetermined direction by orientation if desired. Each succeeding horizontal hole after the first may be closely spaced vertically above the previous one; or it may be considerable distance above. This is indicated in Fig. 2. The holes can be cased with flexible pipe if desired but there would seem to be little advantage in this and pipe in the hole might be troublesome at a later date. If it is believed necessary or desirable, the holes can be packed with gravel.

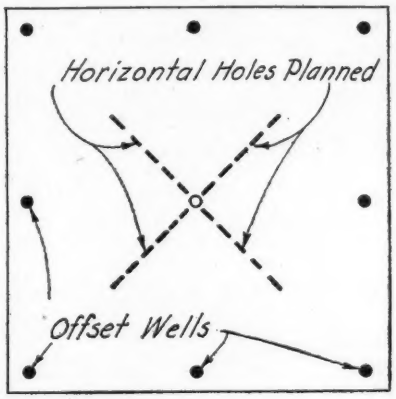
Drilling Procedure

The horizontal drain holes are drilled at an arc from the vertical bore until they reach a horizontal direction and are then continued in this general horizontal direction until they reach the distance desired. Usually they are curved slightly upward in order to keep the lowest part full of oil and thus provide a liquid seal that will shut off an undesirable escape of gas. The holes are drilled from open hole or through windows cut in the casing or liner, depending on the well conditions.

The special equipment required consists of a turbine bit and flexible drill pipe. The bit is rotated by drilling fluid which is circulated by mud pumps, the drill string itself not rotating. The mud is maintained at a suitable viscosity for operation of the bit. The work is generally done with a portable drilling rig but requires pumps that are adequate to supply the necessary pressure and volume of fluid to operate the bit.

Only the lower part of the drill string consists of flexible pipe, the length of this flexible pipe being that which is necessary to reach from the vertical bore to the point in the sand to which the drain hole is to extend. The remainder of the drill string is of conventional drill pipe. The bottom flexible joint to which the bit is attached is made from a curved section of drill pipe. This causes the hole to start off in an arc as the bit begins cutting. The other flexible joints are straight and follow the curved joint along the arc which it establishes.

The flexible joints are made from 4½-in. external flush joint drill pipe as shown in the illustrations. A spiral slot is cut through the wall of each joint of pipe for its entire



length except for a distance of approximately 15 in. at each end. The joint is then lined inside with rubber and this rubber lining is made fluid-tight at each end to prevent leakage of the circulating fluid furnishing the power to rotate the bit. This construction of the straight flexible pipe provides adequate flexibility for the pipe to change from a vertical to a horizontal direction as it passes out of the well bore and into horizontal hole.

The curved flexible joint used at the end of the string and to which the bit is attached is of the same construction as the straight joints except that the slot is cut in a joint of drill pipe that has been bent to a specified radius and heat treated to maintain its curved form when no external force is applied. The radii used have ranged from 20 to 35 ft. and it is by selecting the proper radius for the curved joint that any slight upward direction of the horizontal hole has been secured. Under most conditions a 35-ft. radius joint will cause the hole to continue in approximately a horizontal direction after the vertical arc from the bore has been drilled because gravity and other forces cause the curved joint to straighten out as the bit continues to make hole.

Before running into the well a mandrel is inserted as a core through the curved joint to keep it straight until it reaches the depth at which the horizontal hole is to take off. The mandrel is removed from the pipe before drilling operations start and allows the curved joint to assume its curved form within the limits of the hole in which it is confined. This causes the bit to contact the side of the hole and start off at an angle when it is rotated.

The bit is a rotary turbine bit which attains a rotational speed of approximately 6000 r.p.m. but is so designed that the cutters rotate at a much slower speed. The entire bit is made as short as possible to provide for drilling the curved hole. With the bit in position in the well and the mandrel removed from the curved flexible joint, the pumps are started and cause the bit to rotate. It digs into the sand wall of the bore and starts new hole. It has been found that when the drill string is raised and lowered after removing the mandrel, but before the pumps are started, that the bit will slide up and down the hole with little resistance. After the bit has started to drill, however, weight will show up immediately on the weight indicator if the string is lowered and this can be used as a check to make sure the bit is actually drilling out the side of the vertical bore. Only a very slight weight is carried on the bit during drilling. From present experience the mud pump should be capable of delivering 400 g.p.m. at a pressure of approximately 700 p.s.i.

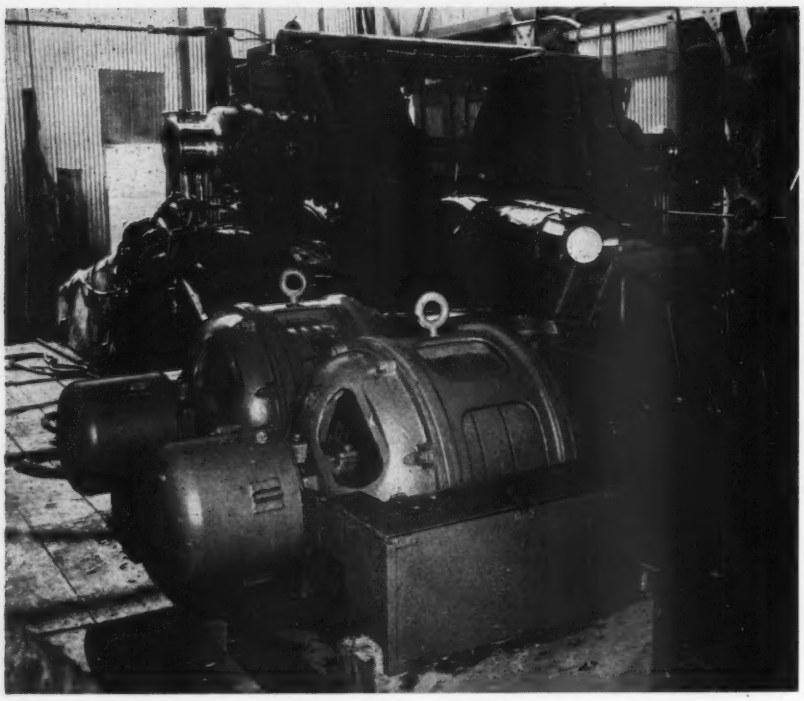
Well's Production Increased

Several tests of an experimental nature have been made with horizontal hole drilling equipment during the past year but in the latest well so drilled the work was performed as a regular operation. This well had been shut in for 17 years. Eight holes were drilled from open hole below 12½-in. surface casing but only 6 bits were used for the operation. Four of the holes were 70 to 80 feet in length, one was 48 feet, one 35 feet, one 23 feet and the other 10 feet. The vertical locations of the holes were in an old producing horizon and were in a section of the well lying between 800 feet and 970 feet.

(Continued on Page 35)

Installation Design to Facilitate Deep Drilling

(Continued from Page 9)



A view of the Ideal drawworks powered by two 125 hp Westinghouse motors.

form is for racking 4-inch drill pipe when it is used and is 120 feet above the ground. The 4-inch stands will consist of 4 singles averaging 31 feet, or a total of approximately 125 feet per stand. Two fingers are used, one at the top runaround and the other half way between it and the derrick floor. The lower one is to eliminate sway in the stands. Other derrick equipment includes two wire line guides and drilling control instruments, as well as standard derrick and rig equipment, some of which may be changed to different types or sizes as conditions necessitate.

Shortly to be installed is an interphone system which will give constant communication between driller, derrick man and pump house. This is particularly necessary because of the location of the well near a main railroad line and heavy traffic highway.

Carrington King

(Continued from Page 5)

shall establish such organization as may be necessary to carry out its functions under the agreement. The expenses of the Commission shall be shared equally by the signatory governments.

Article V:

The signatory governments agree:

(a) That they will seek to obtain the collaboration of the governments of other producing and consuming countries for the realization of the purposes of this agreement, and to consult with such governments in connection with activities of the Commission.

(b) That they will assist in making available to the Commission such informatoin as may be required for the discharge of its functions.

Article VI:

The signatory governments agree:

(a) That the reports of the Commission shall be published unless in any particular case either government decides otherwise;

(b) That no provision in this agreement shall be construed to require either government to act upon any report or proposal made by the Commission, or to require the nationals of either government to comply with any report or proposal made by the Commission, whether or not the report or proposal is approved by that government.

Article VII:

The signatory governments agree:

(a) That the general purpose of this agreement is to facilitate the orderly development of the international petroleum trade, and that no provision in this agreement, with the exception of Article II, is to be construed as applying to the operation of the domestic petroleum industry within the country of either government;

(b) That nothing in this agreement shall be construed as impairing or modifying any law or regulation, or the right to enact any law or regulation, relating to the importation of petroleum into the country of either government;

(c) That, for the purposes of this article, the word "country" shall mean

(1) In relation to the Government of the United Kingdom of Great Britain and Northern Ireland, the United Kingdom, all British colonies, overseas territories, protectorates, protected states, and all mandated territories administered by that government and

(2) In relation to the Government of the United States of America, the continental United States and all territory under the jurisdiction of the United States, lists of which, as of the date of this agreement, have been exchanged.

Article VIII:

This agreement shall enter into force upon a date to be agreed upon after each government shall have notified the other of its readiness to bring the agreement into force and shall continue in force until three months after notice of termination has been given by either government or until it is superseded by the international petroleum agreement contemplated in Article III.

In witness whereof the undersigned, duly authorized thereto, have signed this agreement.

Baash-Ross News

BAASH-ROSS TOOL COMPANY · LOS ANGELES · HOUSTON · NEW YORK

OUR 25th YEAR

CELLAR-SAVING COMPACTNESS

...one of Six * casing head problems solved by Baash-Ross!

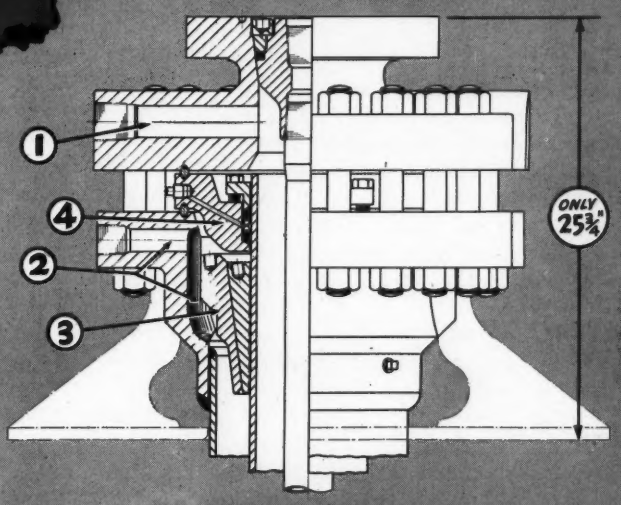
OPERATORS STATE THAT:

To save on rig time, to cut installation costs and simplify maintenance, wells today are being drilled with as little cellar as possible—often with no cellar at all. But to make minimum cellars practical, landing and casing head equipment is needed that is really compact. *What can be done?*

Baash-Ross has the answer!

It's a complete line of casing and landing head equipment in which every last inch of space has been utilized... in which the suspensions have been designed for much greater compactness... in which outlet connections have been moved from their normal position and unitized into the flanges... and in which still other far-reaching advancements have been incorporated to bring over-all height to a minimum. Yet these advantages have been achieved without minimizing the length of slip suspensions or sacrificing any other feature that adds to the over-all strength or safety of the assembly. Furthermore, no special adapters or drilling flanges are required for connecting the drilling control equipment to the casing head assembly!

Check over at right the typical space savings you make with Baash-Ross equipment. Then remember that this space-saving compactness is just *one* of SIX major casing and landing head improvements embodied in the new Baash-Ross Casing and Landing Head Equipment. Before purchasing *any* casing head equipment we urge you to get the full story on the many savings and advancements you make by selecting Baash-Ross. Call your nearby Baash-Ross representative for complete data... or write direct!



BAASH-ROSS ASSEMBLY

Size: 11¾" x 7" with 2½" EU Tubing

FOR EXAMPLE, compare the unusual compactness of this typical 2-string Baash-Ross assembly with conventional equipment. Note (1) how the Spool outlets are unitized into the flange itself—not using up valuable space in the riser below, above or between flanges. Also (2) note how the outlet in the body flange is connected to the casing by a cored channel *behind the slip suspension* —not by an outlet taking up additional space below the slips. Note (3) how the specially-designed tapered spider rests on a seat deep within the casing head, thus conserving space and reducing over-all height of the landing head, and note how the pack-off unit (4) fits into a recess above the slips and spider, further conserving space yet maintaining ready accessibility of the packing element.

These are a few of the many ways space has been cut to a minimum in the Baash-Ross Heads. Check the unusual compactness of Baash-Ross equipment on any hook-up you use. Measure. Compare. You be the judge!

THE OTHER FIVE

PROBLEMS SOLVED BY BAASH-ROSS CASING AND LANDING HEAD EQUIPMENT

PERPETUAL
PRESSURE CONTROL
...quick plastic pack-off anytime without breaking connections or killing the well!

WIDE-RANGE
VERSATILITY
...readily adaptable to any number casing strings—any type of tubing suspension!

PRE-TESTED
PACK-OFF
...all welds and pack-offs pressure-tested at time of installation to assure tight seal!

QUICK
EASY INSTALLATION
...base and casing head unitized, handling of drilling riser simplified—and other features!

COMPLETE
INTERCHANGEABILITY
...hook-ups and suspensions readily interchanged. All fittings and dimensions API throughout!

Field Development

PREPARED BY CALIFORNIA OIL WORLD NEWS SERVICE

Los Angeles Basin

Beach Try Seeks Deep Formations

Shell Oil Company, Inc., Alamitos No. 48A in the Long Beach area has passed the 14,000-ft. mark and is continuing to explore ahead at 14,094 feet in quest of oil hitherto untried depths.

Turnbull Canyon Wildcat Gives Up

Initial effort of the Los Angeles Brewing Company in Turnbull Canyon was abandoned at a barren depth of 2745 ft. It was known as Jones Comm. No. 1 and situated on sec. 24-2s-11w.

New Activity At Wilmington

Warren L. Meeker and Russell D. Garner have staked location for Schneider No. 1, 185 ft. north and 75 ft. east from the C/L of Hiway 101 and Island street at Wilmington.

At the northwest corner of State and Frigate streets, Los Angeles Basin Petroleum Company is rigging up to redrill Phillips No. 3 well. The company is headed by T. H. T. Aitken.

Brea Wildcat Remains Idle

El Rancho Exploration, El Rancho No. 1 on sec. 30-2s-9w in the Brea area of Los Angeles County was last reported standing idle, with hole bottomed at 405 ft. Location falls near the Los Angeles-Orange County line.

Del Valle Test Making Progress

Federal Oil Company, Federal-Towle No. 1, sec. 3-4n-17w in the Del Valle area of Los Angeles County is drilling in hard sand at 1900 ft.

Las Llajas Explorer Drilling and Coring

Standard of California, Brady Estate No. 2-1A in the Las Llajas area of Los Angeles County continues to core and drill ahead at 9063 feet, without official intimation of what may have been uncovered of petroleum interest to present depth. The drill site is on sec. 13-3n-17w.

In the Aliso Canyon area, Standard's Wigdal No. 1 on sec. 19-3n-16w is standing cemented with 13¾-inch casing set at 2310 ft. Total depth is 2502 ft.

Wilshire Oil Company, Marquis No. 1 on sec. 35-3n-16w is making hole ahead at 3510 ft. Circulation has proved bothersome in the well on occasions.

Chino Hills Well Bailing

Chino Hills Oil Company, Kraemer-Backs No. 3 on sec. 33--2s-8w in the Chino Hills area of San Bernardino County is bailing after drilling to 1244 ft. and landing a 6⅝-in. string at 1220 ft.

General Petroleum Sidetracks Fish

General Petroleum's Librown No. 1 wildcat on sec. 21-3s-17w is making new hole steadily ahead at 11,325 ft. after sidetracking fish.

Los Angeles Try Reaming Core Hole

Seaboard Oil Company, No. 1 test in the Los Angeles brick yard about one mile from the City Hall on sec. 21-1s-13w cored to 6979 ft. in hard sandstone and now is reaming out core hole. Probably the most interesting aspect of the well to date is encounter with a new and untested oil sand not produced in the old Los Angeles field. This fact, however, has not been officially confirmed.

Bandini Wildcat Starts Drilling

C. C. M. O. Company, Bandini No. 1 wildcat test on sec. 21-2s-12w in the Bandini area, east of Los Angeles metropolis, is drilling at 501 ft. This is a projected deep test.

C. G. Willis, Pansini No. 1 on sec. 23, same township, is running 7-inch casing presumably as a protection string, after carrying the hole to 8195 ft.

Richfield Oil Corporation, U. P. Unit No. 1 on sec. 9 continues to fish with the top at 6709 ft. Bottom is 8496 ft.

The company is reported considering the drilling of two more wells in the area.

Castaic "Cat" Drills Shale

O'Kane & Brain, Inc., O'Kane & Brain and Barnsdall No. 1 on sec. 17-5n-16w in wildcat ground in the Castaic area is making hole ahead at 2094 ft. in shale. A core from 1449 to 1470 ft. was black shale. Another core taken in the interval of 1661-74 ft. was shale.

Newhall-Potrero Well Drills Deeper

Barnsdall Oil's R.S.F. No. 5 is drilling at 8920 ft. in sand and shale. On formation trial of the interval of 8580-8698 ft. in the 5th zone, recovery was 14 1/3 stands of 34.4

gravity oil and some mud.

One-half mile north of production, Newhall Corporation, Wolfson No. 1 on sec. 26-4n-17w is drilling at 9420 ft. Electric log has been run to 9484 ft. The well evidently is running low structurally.

Beach Test Rigging Up

Mohla Oil Company is rigging Atha-SLW-Mohla No. 7-13 on sec. 13-6s-11w in the Huntington Beach district to start the drill. A contract job, Gibson Drilling Company is contractor.

Shell Begins New Basin Prospector

Shell Oil Company, Inc. has spudded Dominguez Estate No. 1 in the Dominguez area on sec. 2-4s-13w, and is now making fast time through surface formations.

In the Seal Beach district, Shell's Bryant Ranch No. 1 on sec. 34-4s-12w is coring sand and shale at 8833 ft.

Gardena Project Continues Testing

Without official disclosure of the present appearance of the well, Ohio Oil continues to perforate, test and squeeze its interesting Gardena No. 1 wildcat on sec. 24-3s-14w near Gardena.

The 7-in. is set at 10,353 ft. and bottom is 10,594 ft.

Water troubles associated with the project are said to be reminiscent of performance of the El Segundo try drilled by the Pauley brothers more than a year ago.

West Newport Area Active

Sierra Trading Company is preparing to drill a well in the West Newport area near the corner of 21st and Irvine streets.

On sec. 18-6s-10w, D. D. Dunlap and Dorothy Dunlap are building rig for Aldrich Land Company No. 2.

Currently, there are no less than 20 drilling jobs at various stage of operational progress in the West Newport area.

Climax Near For Leffingwell Test

Standard of California's Lewis Comm. No. 1 wildcat test, the focal point of Los Angeles Basin oil interest, was last reported undergoing water shut-off test on 7-in. casing cemented at 10,145 ft. Total depth is 10,635 ft., with plug at 10,403 ft. The hole was cleaned out 5 ft. below the shoe.

After effecting water shut-off, the hole will be cleaned out to 10,403 ft., a prelude to a conventional production trial.

Leasing in the general vicinity of the Standard project has been at a feverish pitch for several weeks. Holders of strategic ground in the area, in addition to Standard, includes Bolsa Chica, Barnsdall, George F. Getty, Universal Consolidated, Hogan Petroleum, British-American, Pike Drilling, Southern California Petroleum, Tide Water Associated, Hathaway Company, Ike Burroughs and Associated Pipe and Engineering.

Prospects of the well have not been divulged by Standard, but the popular opinion is that between 100 to 150 feeet of oil zone was uncovered.

The drill site is on Sec. 11-3s-11w, between fields at Santa Fe Springs and West Coyote.

Signal Scores At Huntington Beach

With the completion of Signal-Bolsa No. 55, Signal Oil & Gas Company now has scored a total of 70 producing wells on its Bolsa Chica Gun Club lease on the marsh lands at Huntington Beach, without recording a single drilling failure, since inaugurating the program on the lease five years ago. Present production of the new well is 94 barrels daily of 26.6 gravity oil, cutting 31 per cent.

Signal-Bolsa No. 56 is installing pumping unit to pump from 4090 ft.

Puente Venture Standing Idle

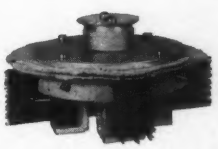
Standing idle after drilling to 2952 ft. in shale, Troy Petroleum may launch a test of a few showings logged uphole in its Troy No. 1 on sec. 27-2s-10w, not far from the town of Puente.

The CAVINS CEMENT DUMP BOTTOM

is the tool you need for dumping any amount of cement in a continuous operation without interruption.—The full open throat eliminates the hazard of stringing cement through the fluid column.—There are no valves, sleeves or ports to become fouled or clogged—no danger of accidental or premature unloading due to line whip or faulty brakes.

The CAVINS BRIDGING PLUG

which is used in combination with the Cement Dump Bottom, is ideal for abandonment and plug-back testing work, or in pipe salvaging programs.—It is made of drillable material, and can be used either as a temporary or a permanent installation.



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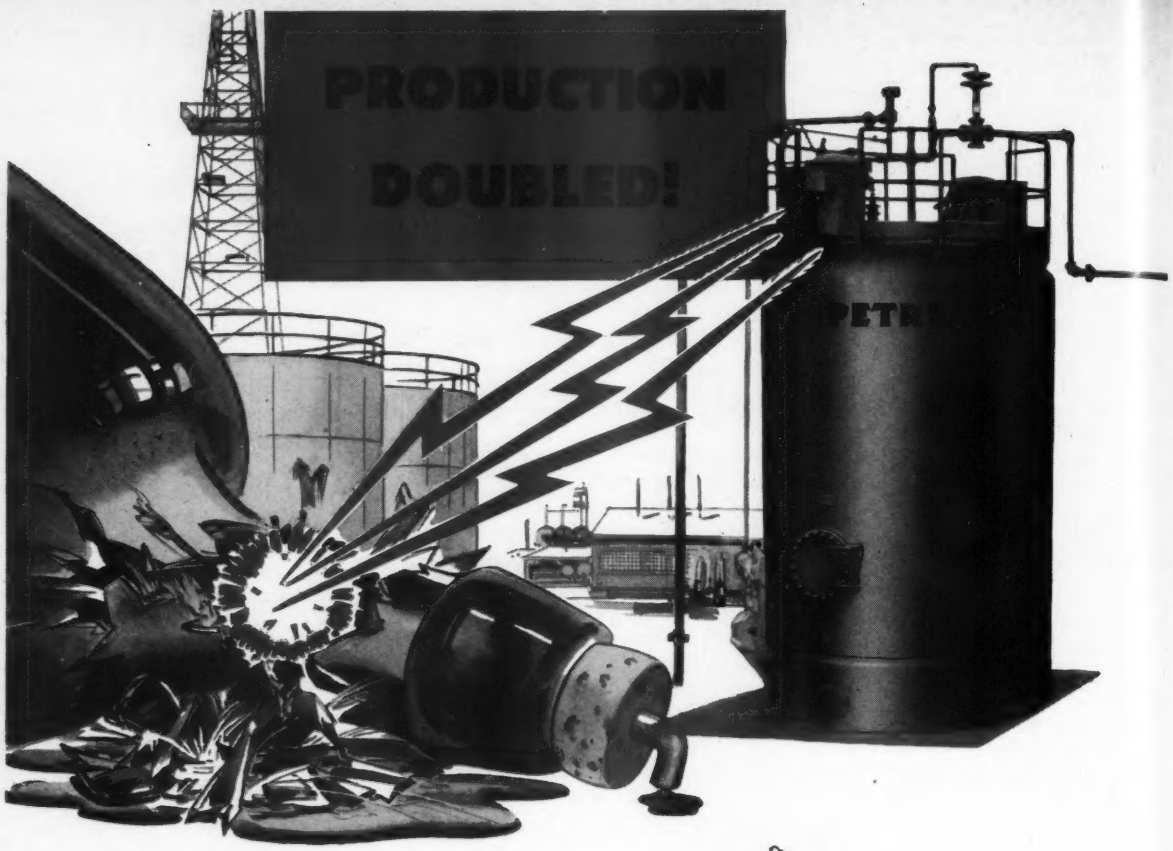

Dehydration Bottleneck *Smashed*

TREATING COSTS CUT 71%

By installing PETRECO treating units on the Magenheimer Lease at Gato Ridge, California, The Petrol Corporation was able to reduce treating costs by 71%. This is represented by a saving of 2½c per barrel over previous practices.

And this doesn't tell all of the story either. By installing the PETRECO system a bottleneck was opened to the extent that production and oil shipments were increased from 3000 barrels per month to 6000 barrels per month. Magenheimer Lease first changed to the PETRECO system with a one-unit installation. The quick proving of savings and step-up of production was responsible for the installation of two more units on the adjoining Tognazinni Lease.

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We recommend GOODYEAR ASBESTOS STEAM HOSE for use in refineries, foundries, steel mills, and in general construction work, and dock and barge services; also on pile drivers, steam hammers and other services requiring heavy duty, long life steam hose.

Reinforced with multiple braids of heavy duty, first line asbestos cords. Heavy tube retains its softness under high temperatures. Black cover is heat and abrasion-resistant.

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Union Bailing La Habra Well

Union Oil Company, Sansinena No. 17 on sec. 30-2s-10w in the La Habra area, between Whittier and Fullerton, is bailing for production. Total depth is 4600 ft., with plug at 4280 ft. The 7-in. casing is set at 3553 ft. and the hole was cleaned out to 4219 ft.

In the Montebello field, Union's Paul J. Howard No. 4 perforated the interval of 8850-8625 ft. and went to the tanks flowing 132 barrels a day 37.4 gravity oil, cutting 20.6 per cent through a quarter-inch bean, with 260/1015 pounds and 166 mcf gas yield.

Playa Del Rey Gas Test Starts

Southern California Gas Company is digging cellar for S. C. G. No. 1 on sec. 28-2s-15w, a designated shallow gas test to approximately 3200 ft. in the Playa del Rey area.

Del Valle Work Still Expanding

Approximately three-quarters of a mile south and west of Texas Company's discovery well in the Del Valle area, Universal Consolidated Oil and T. E. Adams are moving in equipment to location to start the work on Aguirre No. 1, 70 ft. north and 200 ft. west of the southeast corner of W½ of NE¼, sec. 13-4n-18w, Ventura County. The lease embraces 100 acres.

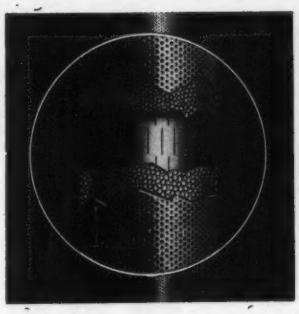
The Texas Company, Kern No. 41-18 on sec. 18 of the township, pumped 13 barrels in 4 hours and 8 barrels of free water, after being given the finishing touches. Bottom is 7612 ft. and plug at 3375 ft. The 7-in. is set at 3000 ft. No. 22-18 is drilling at 2206 ft.

The field proper, R. E. Havenstrite, Operator, Barnes No. 6 is testing after cementing 7-in. casing at 5897 ft. The operator's Lincoln No. 10, which was drilled to 8620 ft. and plugged to 3492, will redrill and test for the Sherman zone.

Herely-Kelley, Orduno No. 2 bottomed at 3216 ft., set 7-in. at 2965 ft. ran liner and is reported swabbing at a rate of 350 barrels daily.

Superior Oil and British American, Handy No. 1 on sec. 18 is drilling in hard shale at 8305 ft.

Gravel Pack Your Well When You Run Your Liner!



A PACIFIC Liner simplifies your sand control problem because it's correctly pre-packed with gravel and ready to run the same as an ordinary liner . . . and ready to give you trouble-free sand control for years!

Investigate the many important advantages of Pacific Pre-Packed Gravel Liners — their sheet steel construction which provides a round smooth and far more rugged outer screen, their superior filtering efficiency regardless of sand content, and their easy, safe installation under all conditions.

WRITE FOR DESCRIPTIVE FOLDER!

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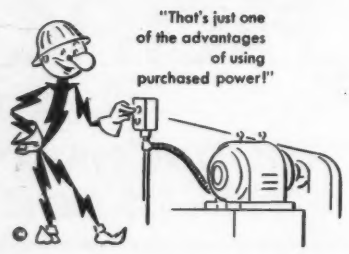
Santiago Test Rigs Pump Unit

Western Gulf, Woodward USL No. 3, southwest of the field discovery well, on a test of the shallow zone swabbed oil and water at the rate of 20 barrels a day and now is rigging pump. Depth is 991 ft., with 10¾-in. casing cemented at 530 ft.

Richfield Oil's Leutholz No. A-2 flowed 1327 barrels in 15 hours before shut in for lack of storage. Gravity was 21-deg. and cut 2 per cent. A foundation is in for Leutholz No. A-3 on sec. 22-11n-23w.

electric pumping is proved



Years of trouble-free service have proved the reputation of **electric** pumping for dependability, efficiency, and economy. Smooth, steady flow of purchased power can help boost production and obtain maximum use of equipment. Purchased power requires minimum maintenance . . . saves valuable manhours.

The low installation costs of electric pumps are important too . . . together with the economy of central station-generated electricity. Operating costs are also kept down because electrically driven equipment can more closely match the capacity of the well.

Talk with an Edison oil field engineer. He will gladly give you facts concerning your special needs with no obligation to you.

SOUTHERN CALIFORNIA EDISON COMPANY LTD.

San Joaquin Valley

Fruitvale Job Cores And Drills

In the Fruitvale area of Kern County, General Petroleum's Calloway No. 66-17 on sec. 17-29s-27e is coring and drilling ahead at 9870 ft.

National Iron Works Galtes No. 1 on sec. 14, which has been standing idle for several weeks at 3083 ft., continues inactive at that depth. A string of 8⅝-in. casing is cemented on bottom.

Stockdale Well Coring Ahead

Western Gulf is coring at 4485 ft. in Stockdale No. A-3 on Kern County Land Company land in sec. 34-29s-27e in the Stockdale area. On formation trial of the interval of 4255-4300 ft., open 30 minutes, recovery was 130 ft. of oily gassy mud.

Kettleman Duo Seek Deep Pay

Of consequential importance are the two test wells underway in the famed Kettleman Hills area, which are both designed to ascertain the production possibilities of formations of Eocene age in this part of the San Joaquin Valley.

On the South Dome, Los Nietos Producing & Refining Company is drilling No. 41 on sec. 13-25s-19e at 7895 ft. in sandy shale.

On the Middle Dome, Standard of California has reached 7950 ft. in No. 73-30V on sec. 30-23s-19e, after recovering liner. This is an old Petroleum Securities well, which Standard took over to carry on down from old bottom of 7790 ft.

Bolsa Chica Oil shares interest with Standard in the play under a unitized operational agreement.

The Eocene is not anticipated by geologists before 11,000 ft.

Cottonwood Creek Wildcat Abandoned

The Winifried Schneider, Pritchett No. 1 on sec. 1-17s-24e in the Cottonwood Creek area of Tulare County is an abandonment at 1334 ft. The hole went into granite at 1130 ft.

Edison Area In Limelight

The Edison area of Kern County, which was first opened up to production 10 years ago, has been showing new life in recent months.

General Petroleum Corporation is drilling Cauley Fee No. 53-16 on sec. 16-30s-29e at 4550 ft. Location is being graded for Speed No. 38-11 on sec. 14 of the township, and Speed No. 28-11 is being put on the pump, after flowing by heads 188 barrels in 13 hours from 3013 ft. Leddy-Nichols No. 4 is rigging up to deepen from 2581 ft.

On section 14, Jergins Oil Company is running 8⅝-inch casing in Hershey No. S-1, following formation test of the interval of 2170-2272 ft. With the tester open one hour's results were gas in 3 minutes and oil in 18 minutes and a flow of 22.3 gravity oil at a 500 barrel a day rate. Bottom is 2272 ft. in schist, top of which is placed at 2170 ft.

Richfield Oil Corporation is redrilling Cauley No. 15-16 on sec. 16 at 2857 ft., and has reached 4250 ft. in S. P. No. 15-1 on sec. 31-29s-30e.

Devils Den Well Rerunning Tubing

Hillview Oil Company, Alferitz No. 3 on sec. 14-25s-18e is rerunning rods and tubing after cut rods parted; following a test pumping 200 barrels a day, cutting 35 per cent.

J. A. and Dan Foreman, No. 38 on sec. 26-25s-18e is idle at 310 ft.

McVan Project Now Perforating

B. & R. Oil Company is perforating its Poso No. 2 well, sec. 14-27s-27e in the McVan area of Kern County, after cementing a string of 8⅝-in. casing on bottom at 1325 ft.

Pyramid Hills Try Cores Brown Shale

Northeast of shallow producers of Standard, F. S. D. Oil Company is Core Hole No. 1 on sec. 8-24s-18e is drilling and coring in brown shale at 622 ft. The try was reported correlating satisfactorily.

Mojave Wildcat Oil Failure

In the Mojave area of Kern County, Thomas M. Blake's Cinco No. 1 on sec. 22-31s-37e found nothing of importance to a bottom of 1718 ft. and has been listed for abandonment.

J. S. & L. Oil Company, Childs-Well No. 1 on sec. 9-32s-37e is down 2083 ft.

Alpaugh Test In Prospect

Standard of California has staked location for Cutter Unit No. 2 wildcat test on ground six miles west of Alpaugh, 1350 feet north and 1320 west from the southeast corner of sec. 29-32s-22e.

Burrel Try Finds All Sands Barren

General Petroleum Corporation, Burrel No. 47-1 in sec. 1-17s-18e, Fresno County, was abandoned at 8194 feet. All sands were gray. The top of the Kreyenhagen was placed at 7582, Courtney 7895, Nortonville 7989 and Domengine 7994 ft.

Cantua Creek Well To Try Gas

The next move in Tide Water Associated, S. P. No. 82-15 in sec. 15-17s-15e in the Cantua Creek area, Fresno County, will be a test of the gas possibilities at this location.

Drilled to 13,019 ft., the well is plugged at 11,893 ft. and has 3353 ft. of 5½-in. casing including 188 ft. of 200 mesh. perf. hung at 11,893 ft. and cemented through perforations at 11,665 ft.

San Emidio Tests Stake Locations

Western Gulf, which recently discovered a new field in the Santiago area, southeast of the old Sunset field, has staked locations for two wildcat wells in the San Emidio area of Kern County.

They will be known as K.C.L.-Los Lobos A No. 1 on sec. 4-10n-22w and K.C.L.-Los Lobos A. No. 2-1 on sec. 34-11n-22w.

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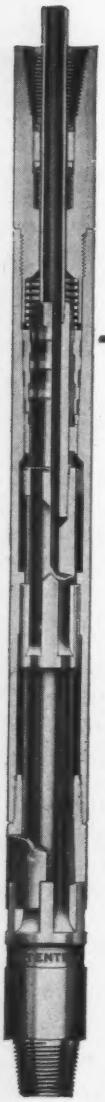

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Jasmine Try Reports Sand

Utility Oil Associates are preparing to gun-perforate and test Quinn No. 4-A, sec. 15-25s-27e in the Jasmine area of Kern County. The 7-in. is set on bottom of 2901 ft. Oil sand was reported cored at 2850 ft.

The Jasmine area has been the scene of numerous test wells, which have always failed to measure up to commercial standards, although some small production has been developed.

Cuyama Valley Test Drilling

U. S. Drilling Company's Cuyama No. 1 in the Cuyama Valley area on sec. 19-10n-24w is drilling ahead below 1500 feet. It is located about 12 miles southwest of Maricopa, across the Kern County line in San Luis Obispo County.

Hancock Redrills Union Avenue Try

South of Bakersfield in the Union Avenue area, Hancock Oil Company is redrilling K. C. L. No. 1 on sec. 6-30s-28e at 4195 ft. Original depth is 5017 ft.

Paloma Area Again To Fore

Hogan Petroleum Company's Symons-Two No. 27-7 on sec. 7-32s-27e at Paloma is running 7-in. casing. A southeast extension test, the well found the top of Symons at 10,962 ft. and the top of Paloma at 11,298 ft. in going to a total depth of 11,401 ft.

At the extreme east end of the field, Western Gulf, Symons No. 63-7 on customary formation trial of Symons oil sand in the interval of 11,520-11,621 ft., flowed 268 barrels a day rate of 51 gravity, cutting 4 per cent through a 20/64-in. bean. Gas yield was 1140 mcf.

Superior Oil Company, Anderson No. 36-35 on sec. 35-31s-26e is drilling below 11,000 ft. in shale and chert.

On sec. 34-31s-26e, Lloyd Corporation is rigging up Houchin No. 63-34, a followup to the recently completed Houchin No. 54-34, a producing well of substantial proportions.

Ridge Petroleum Sponsor Valley Try

Ridge Petroleum Company (William Parr, president; J. T. Wilcox, vice president; and J. D. Turner, secretary-treasurer) has spudded its Bocqueros No. 1 on sec. 17-24s-18e at Pyramid Hills, Kings County.

Union Abandons Raisin City Test

Union Oil Company, S. A. & F. L. No. 38-29 on sec. 29-15s-18e found the Eocene gray and was abandoned at a total depth of 6729 ft. The top the Kreyenhagen was placed at 6298 ft., base at 6477 ft., and top of Domengine at 6662 ft.

After drilling and coring its Petrol No. 2-14 on sec. 14-15s-17e to a total depth of 5248 ft., the Petrol Corporation is running casing to set at a point above oil sand cored at approximately 5220 ft.

Seaboard Oil Company is grading ground for its S. T. U. No. 23-14 on sec. 14.

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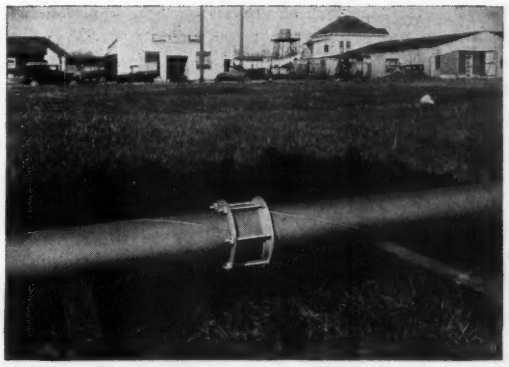

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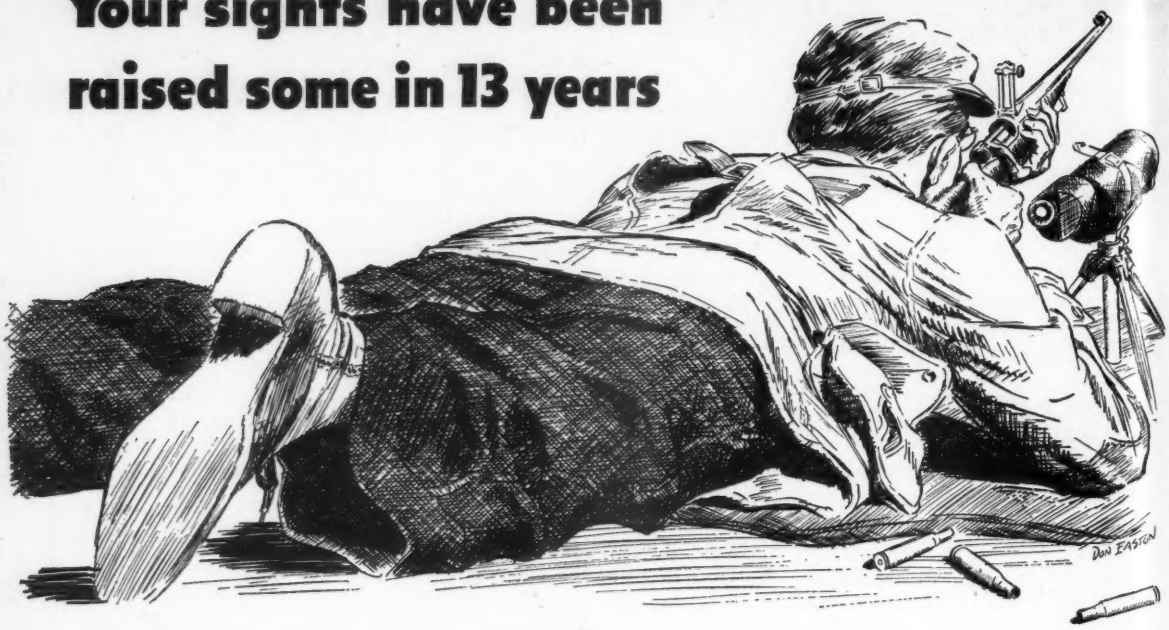

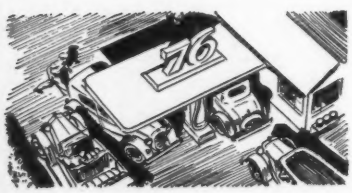

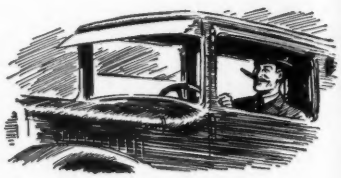

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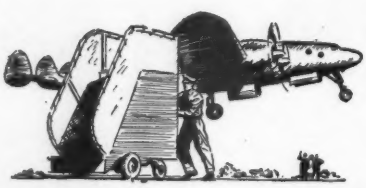
3. People were more than satisfied with our 1932 gasoline—in 1932. If no improvements had been introduced you'd *be satisfied with it today.* For you would know of nothing better to compare it with. But competition would not permit us to stand still.



4. For each of us know that if we could put out a product a little bit better than the rest of the industry we could *get more business.* Consequently, even the company that was in the lead kept constantly searching for improvements. Progress from year to year was gradual—as it always is.

5. But in 13 years that total progress was considerable. Now if the oil business had been a monopoly—private or governmental—it is doubtful if this would have happened. For there simply aren't the *incentives* to better your product when you already control all the trade.

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Gas Country Tests Drill

Ardley Petroleum Company has reached a depth of 1150 ft. in Almond No. 1 in the Martinez area, Contra Costa County.

In the Livermore area of Alameda County, N. T. Bradford and J. F. Guardino, B. & G. No. 1 on sec. 7-3s-3e has been drilled to 100 feet. Livermore is the home of Max Baer, former heavyweight champion of the prize ring.

Peter Cook, Jr. has abandoned Peter Cook Lower Unit No. 1 on sec. 2-4n-3e in the Rio Vista area, Solano County, and is preparing to spud Peter Cook Upper Unit No. 1 located approximately 2000 ft. north and 2200 ft. west of the southeast corner of sec. 21.

Near the city of Sacramento, Jergins Oil Company is drilling No. 1 on sec. 23-8n-4e, Sacramento County, at 2460 ft.

New Well Begins In Bardsdale Area

San Marino Oil Company, Capital Crude No. 4 on sec. 7-3n-19w has been spudded-in and is drilling at 675 ft., after cementing 11¾-inch casing at 130 ft.

The company's Elkins No. 2 on the same section is idle at 2800 ft. Wilshire Oil's Burson No. 2 on sec. 6 is likewise idle, after bailing dry from plugged depth of 2370 ft.

Isleton Gas Test Fails to Produce

As a sequel to electric log and geophone runs, and side wall sampling, Shell Oil has abandoned Staten Island No. 1 on sec. 35-4n-4e in the Isleton area of Solano County, a production failure. The hole was carried to a total depth of 6500 ft.

Chowchilla Venture Making Normal Trials

Continental and Gulf, Chowchilla No. 1 on sec. 7-10s-14w in the Chowchilla area, Madera County, flowed muddy water on a trial of the perforated interval of 5590-5615 ft., and then squeezed. Four holes were shot at 5175 ft. and tests are now being continued.

Capitan Area Wildcat Planned

West of the Capitan field, Santa Barbara County, Hamilton and Sherman are grading roads for Rutherford No. 1, a wildcat test, located approximately 1500 ft. southeast along north line from most northerly corner Tract No. 4, Refugio Rancho, thence 250 ft. southwesterly at R/A in projected sec. 1-4n-31w.

Operators hold about 1000 acres in the area.

Los Olivos Try Pumping Water

Hub Oil Company, La Laguna No. 1 on sec. 7-7n-30w continues to pump all water. Depth is 5852 ft. Located not a great distance from the Gato Ridge field, a number of oil and gas showings were reported encountered on the way down.

Los Alamos Test Nearing 2500 Ft.

Glenn Buell No. 3 on sec. 15-7n-32w in the Los Alamos area of Santa Barbara County, sponsored by Whittier Associates, is drilling ahead at a depth not far above 2500 feet in fractured brown shale. The well site is in the vicinity of Joseph Archambeault Ranch, location of the company's first exploratory project in that sector.

Padre Canyon Adds New Producing Well

C. C. M. O. has completed Hobson No. A-19 on sec. 14-3n-24w at a total depth of 8436 ft. for a flow of 270 barrels a day of 31 gravity oil through a 32/64-in. bean, with 110 pounds flow pressure and 159 mcf gas. The 7-in. casing is set at 8320 ft.

Wildcat Scheduled For Triunfo Area

Triunfo Exploration Company plans to contract the drilling of a 2000-ft. wildcat test on sec. 13-1n-19w near the town of Trinufo, Ventura County. Jacques Vinmont is president of the company, and Ben H. Woodcock, superintendent.

Carpinteria Test Grading Drill Site

Western Gulf Oil Company is grading ground for Bryce No. 1 on sec. 30-4n-25w in the Carpinteria area, Santa Barbara County. K. L. Kellogg has been let contract for the well, which will explore from a point approximating a mile from the old Pederson wildcat.

In the Snowball anticline area, above Carpinteria Valley, M. T. Grubb, Operator, Snowball No. 1 on sec. 19-4n-24w, Ventura County, is standing with 7-in. casing cemented at 5292 ft., which is bottom.

Ventura Avenue Well Fishing

British-American Oil Producing Company, Hartman No. 14 redrilled to 11,087 ft. and stuck drill pipe at 11,057 ft. Efforts are now being made to loosen fish.

So. Mtn. Try Pump Testing

Los Nietos Company and Lucy Smith Battson C. & H. No. 1 on sec. 22-3n-21w in the South Mountain area, Ventura County, is preparing to make pump tests, after redrilling to 5130 ft. and 2½-in. tubing at 4845 ft. Original depth is 6315 ft.

On sec. 13 of the township, Union Oil is running tubing in Kern No. 5, bottomed at 4500 ft.

New Well At Lompoc Spuds

General Petroleum, Los Alamos No. 3 on sec. 31-8n-33w has been spudded-in and is drilling in the shallow formations.

Union Oil, Purisima No. 20 on sec. 2-7n-34w is still a location.

Long Canyon Well Inaugurates Tests

Shell Oil Company, Inc., McBean No. 1 on sec. 33-3n-20w has perforated 7-in. casing from 8670 to 8780 ft. with 360 shots and is testing. Hole is bottomed at 10,549 ft. plug at 9740 ft. and casing cemented at 9791 ft. The well, a contracted job by Severns Drilling Company, is near the town of Moorpark.

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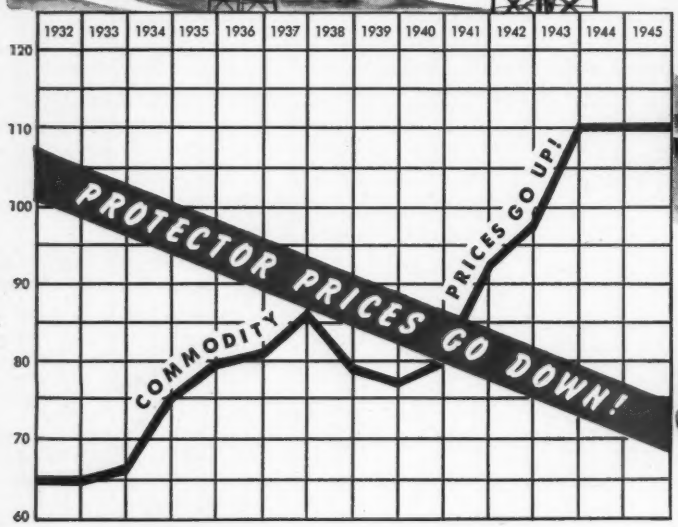

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Anlauf Ranch Test Planned

J. Oscar Smith & Associates are planning to drill another well on the Anlauf Ranch on sec. 21-4n-21w in the Santa Paula Creek area. They have 2600 acres under lease on secs. 21, 22, 26 and 27, and a portion of 23 and 24 in the township.

Their first well had showings amply justifying continued prospecting in the area.

The Smith play shares interest with C. B. Edington, widely known member of the California petroleum industry, and a former Long Beach refiner.

Union Completes Simi Drilling Job

Union Oil Company has finished No. 5 on sec. 22-3n-17w at Simi, Los Angeles County. Drilled to a total depth of 1034 ft., the well was last reported pumping 10 barrels of net oil a day.

In the meantime, No. 6 on sec. 17 is drilling and coring below 400 ft. At Hopper Creek, the company's Moran No. 1 on sec. 1-4n-19w is redrilling at 300 ft.

Timber Canyon Well Sets Conductor Pipe

Five miles north of the town of Santa Barbara in Timber Canyon, Standard of California is cementing conductor pipe in its Andrew Toland Comm. No. 1 on sec. 18-4n-20w, Ventura County. The well is scheduled to go only to moderate depth. Present bottom is 948 ft.

Four miles northeast, Santa Paula Unit No. 1 on sec. 10-4n-20w is drilling at 7902 ft. with developments to date a company secret.

Anticipate New Fillmore Wildcat

E. H. A. Edwards of Inglewood is preparing to embark upon wildcat operation from a drill site on the northeast quarter of the southwest quarter of sec. 27-4n-19w near Fillmore.

Tar Springs Test Recovery All Water

Following a formation trial of the interval between 1375 and 1709 feet, which recovered all fresh water, Tar Spring Ranch No. 2 wildcat, sponsored by Amerada Petroleum in the Huasna area of San Luis Obispo County, has been relegated to history.

Total depth is 1709 ft. Casing is set at 1375 ft.

Trico Try Progresses

Trico Oil & Gas, Atwell Island Comm. No. 1 on sec. 7-24s-23e in the Trico area is drilling at 3123 ft. Drill site falls in Tulare County near the Tulare-Kings County line.

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Malibu Wildcat Stops for Repairs

After carrying its Murray No. 1 on sec. 23-1s-20w in the Malibu area of Ventura County to 3250 ft. J. P. Oil Company halted drilling for necessary equipment repairs. No showings have been reported to date.

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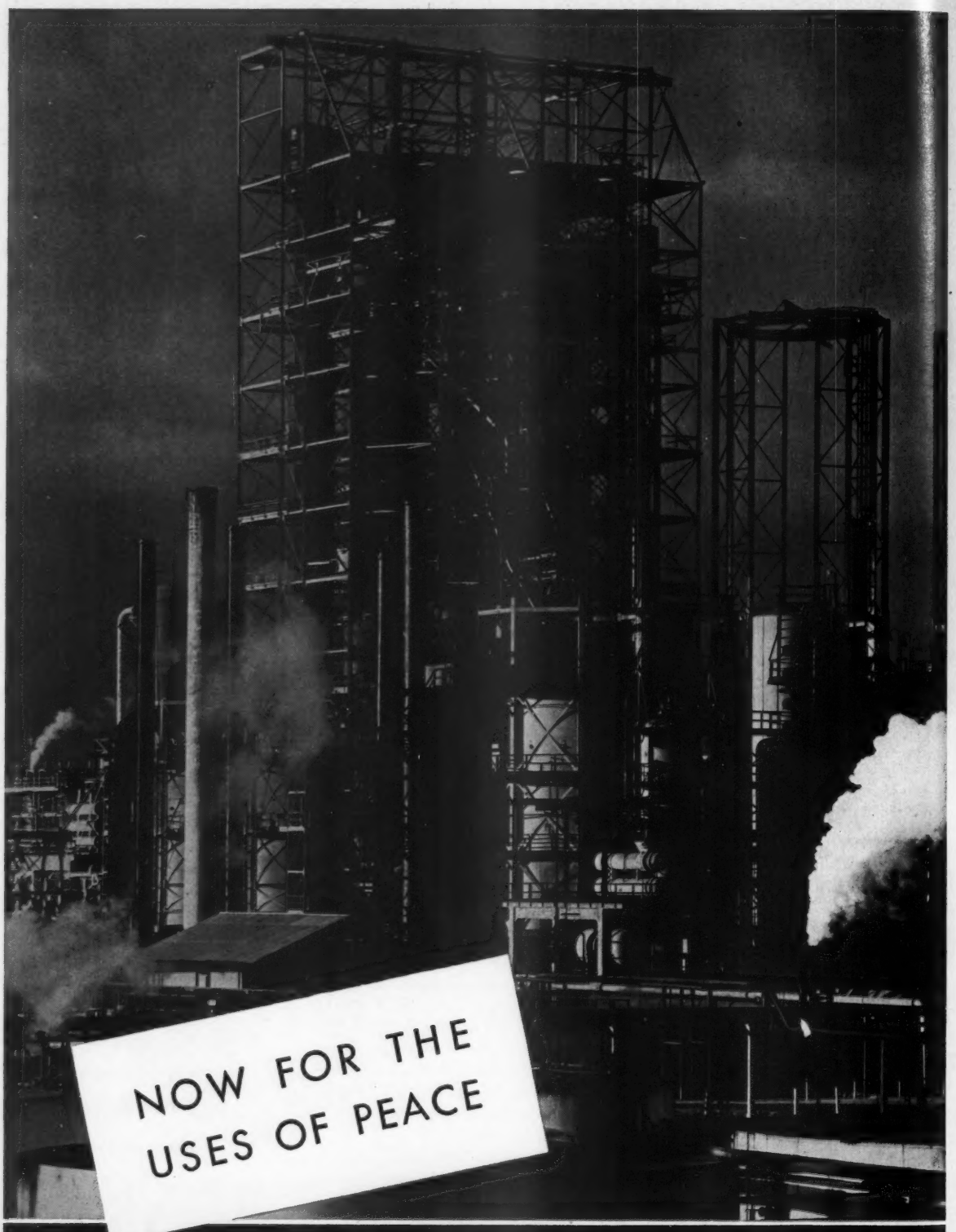

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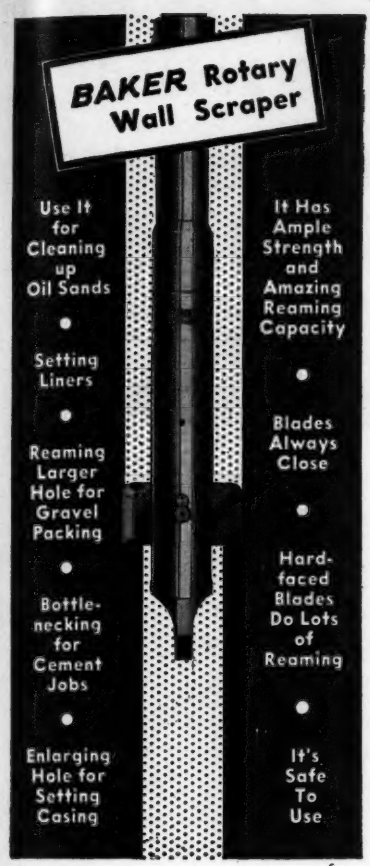
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Bacon Hills Job Recements Liner

Three miles west of Belridge, Bandini Petroleum, Bacon No. 1 on sec. 27-28s-20e in the Bacon Hills is recementing the top of the liner after running a mill went through the bad place in the 7-in. casing satisfactorily.

Key Wildcats Drill At Cymric

Oceanic No. 1 on sec. 22-19s-21e in the Cymric area continues to prospect ahead at a depth of 3450 ft. in shale under the banner of Independent Exploration Company. The ground involved in the test is a Oceanic Oil Company leasehold.

Standard's Fitzgerald No. 55 on sec. 24 is fishing for drill pipe, top of which is at 3952 ft. Bottom of the hole is in shale at 5200 ft.

Union Oil has foundations in for Anderson No. 35-26 and No. 46-26 and locations made for No. 54-26 and No. 47-26 on sec. 26.

Richfield Drills On at Mtn. View

Richfield Oil Corporation, No. 53-16 on sec. 16-30s-28e at West Mountain View continues to drill steadily ahead, with depth 5800 ft.

In the Grapevine-Tejon area, Richfield has Tejon No. 68-35 on sec. 35-11n-19w rigged up, but idle.

So. California Meter Assn. Meets October 18th

The October meeting of the Southern California Meter Association is to be held at the usual place, Rio Hondo Country Club, Downey, California, on October 18, 1945. Dinner will be at 6:30 and the meeting will start at 8:00 p.m.

A technical paper, Characteristics of Differential Flow Meters and Factors Affecting Their Operation, will be presented. The paper was written by L. K. Spink, Engineer in charge of Flow Measurement, The Foxboro Company, Foxboro, Mass., makes a thorough coverage of the reasons for possible errors in, and sets forth the limitations of, the differential type meter. The paper will be presented by Frank J. Renner, Los Angeles Branch Manager of The Foxboro Company.

To balance the meeting, a movie entitled "Mexican Joy Ride" will be shown. The motion picture, in correct technicolor, was produced by Miss Mildred Greene, during an extended stay in Mexico. The picture is a narrative type film covering a trip from the United States to Mexico City, completed only six months ago.

At the meeting September 20th, a very good turnout occurred, and Mr. Gavin Younkin, Pacific Manager of Brown Instrument Company, spoke on the Theory, Operation and Servicing of Brown "Electronik" Instruments. A very interesting talk on Football—Past, Present and Future, also was made by Deke Houlgate. Deke, recently Major Deke Houlgate of the Army Air Forces, is well known in Southern California for the correctness of his predictions of football scores and ratings.

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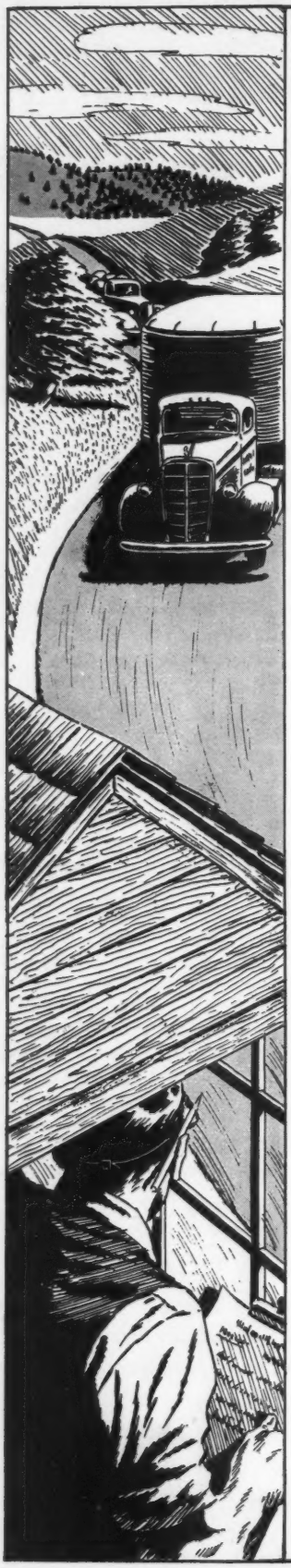


Here — Ahead of Schedule!

NEW TYDOL MOTOR OIL

The new and improved Tydol Motor Oil is here — long before we thought we could offer it to fleet operators. And *this* Tydol is a vastly improved product over the good Tydol you used pre-war. Advances made in the past few years, accelerated by the need for keeping battle equipment on the job, have resulted in an *assembled* oil far in advance of the field.

The new Tydol is a balanced blend of carefully selected base stocks — selected for non-sludging and high-viscosity characteristics; for low carbon forming and anti-shellac tendencies. Formulated right into this scientific combination is a unique *multi-function* additive, combining a number of motor-benefiting qualities.

THE NEW TYDOL GIVES YOU THESE ADVANTAGES:

★ ANTI-WEAR characteristics prolong motor life
★ INCREASED STABILITY for longer oil life
★ ANTI-CORROSION protection for bearings
★ ANTI-FOAMING quality for better performance under stress conditions

Your Associated Representative has complete stocks of Tydol now — in warehouses in your vicinity

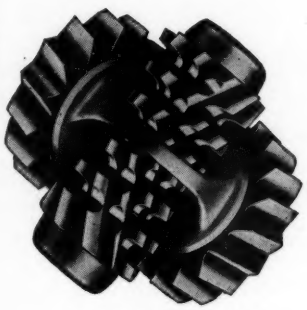
TIDE WATER ASSOCIATED OIL COMPANY

LET'S GET ASSOCIATED

20th YEAR Associated Football Sportcasts
Get Free Schedules at All Associated Dealers

New K-2 H. C. Smith Rock Bits

The H. C. Smith Oil Tool Co. has announced a new long-tooth rock bit for faster drilling through sticky shale and sandy shale. This new addition to the H. C. Smith line of rock bits is known as the K-2 and embodies an improved bearing design which promotes longer bearing life. The cross-section cutters have long, widely-spaced teeth, hard-faced with tungsten carbide before hardening. The tooth design provides good chipping and slicing action.



Type K-2 H. C. Smith Rock Bit

Field-tested for nearly two years, the new K-2 maintains the straight hole reputation of Smith Rock Bits.

Franks Have New Bulletin

Another bulletin, in the series which Franks Manufacturing Corporation of Tulsa is preparing on its complete line of new and improved drilling and servicing equipment, is now available.

Franks latest bulletin features complete description, photographs and capacities of the firm's Improved Model 7000 All-Service Telescoper Unit.

A heavy-duty "All-Service" unit, Franks Model 7000 Telescoper is a self-propelled, power take-off, double or single drum winch unit equipped with a 90 ft., 200,000 lbs. capacity, tubular telescoping derrick. This unit, composed of winch, truck and derrick is adaptable to all servicing jobs on wells which are without derricks. It is so designed, however, that the derrick may be disconnected, and left standing on one location while the unit is moved for operation on jobs where permanent or service derrick is already a part of the well equipment.

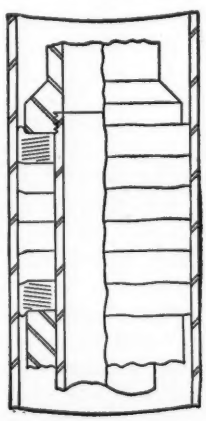
For clean-out work, drilling from the grass roots, drilling in, and deepening, the unit is offered with a Franks Propeller Shaft Rotary Drive Attachment, or a Rear End Rotary Countershaft, or both. If this accessary is not desired at time of purchase, provision can be made for its installation at a later date.

Franks' Model 7000 Truck-Mounted unit, with Spudding Attachment which also may be installed (either initially or later), affords a wide variety of uses: cleaning out and drilling; follow-up rotary drilling; drilling in completions; testing strata; jarring-out liners; fishing work and taking potentials; in all which the cost of maintaining rig-fronts, permanent service derricks and other equipment is eliminated or reduced to a minimum.

Floseal Packer Ring Sets Designed for High Performance Under Severe Operating Conditions

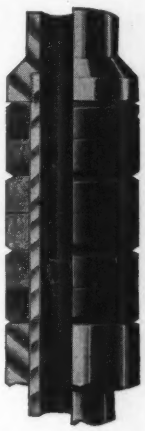
Lane-Wells Company has introduced FLOSEAL integrated packer ring system for Olympic Packers to provide better packer control and easier, more positive operation under the high temperatures and differential pressures encountered in today's deeper wells.

The physical characteristics of the matched pairs of rings are graded so that each pair of outer rings confines and seals the flow of the inner rings as loading is applied. Under progressive loading the inside rings expand first until the load is picked up by the adjacent outside pair. Setting of the Packer is accomplished with a minimum weight yet the seal will hold against high differential pressures and high temperatures.



Lane-Wells FLOSEAL Ring Assembly under full loading. Note minimum extrusion.

The development of the FLOSEAL Packer Ring material is the result of fifty-two comparative performance tests of different ring constructions under high temperature and pressure. The FLOSEAL test was terminated after 2496 hours at 300 F. and 4000 lbs. pressure because no additional extrusion or loss of pressure was noted. This indicated that the test could perhaps be continued for many months without noticeable effect upon the pack-off properties of the ring assembly.



Detail of Lane-Wells FLOSEAL Packer Ring Assembly for Olympic Packers.

For complete details of the FLOSEAL Packer Ring Sets and their performance on Olympic Packers, write Lane-Wells Company, 5610 South Soto Street, Los Angeles 11, California.

Oregon Oil Test Fails

Seeking oil in Oregon, The Texas Company has abandoned its test No. 1 in Columbia County near Clatskanie, and moved its drilling equipment to a new location 15 miles west of the city of Portland.

The initial test was on land owned by a timber company. It went to 5450 feet, before giving up the search.

BUY VICTORY BONDS

Ideco Appoints Vice Presidents

Three Vice Presidents have been appointed for the Ideco sales organization, O. M. Havekotte, President of International Derrick and Equipment Company, announces.

Ferguson Barnes will be promoted to Vice President in Charge of Sales. H. L. Putnam will enter the

FERGUSON BARNES

Ideco sales organization as Vice President — Mid-Continent Direct Sales. G. W. Walton will be promoted to Vice President—Machinery Sales.

Mr. Barnes has served for thirty years in Engineering and Sales for Ideco and other companies in the oil field and construction industries. A graduate of Kentucky State University (his home state) he worked in California, the Mid-Continent and the East. His knowledge of these territories, and engineering as well as sales, will enable him to handle well his new duties.

Mr. Barnes belongs to the American Petroleum Institute, the Columbus Country Club, the Aero Club of Washington and the Athletic Club of Columbus.

H. L. ("Put") Putnam will supervise all direct sales activities of Ideco in the Mid-Continent and Rocky Mountain region, including both equipment and supply store sales.

Mr. Putnam has just retired at a Colonel's rank, having completed over three years of service in the U. S. Army Air Forces, two and one-half of which were spent overseas in the construction and administration of Army air bases. Before entering the Army he was associated for nineteen years with National Supply Co., holding important posts in California, Oklahoma and Texas. Mr. Putnam has many friends in the oilfields who will be glad to welcome him home.

G. W. ("Jack") Walton, formerly Manager of Ideco Drilling Machinery Sales, will continue to supervise the Ideco Machinery Department. Mr. Walton's business career has been devoted to oilfield equipment. He was associated with The National Supply Company in this country and in London, England; with Wilson-Snyder Mfg. Company; with Emsco as Vice President and Sales Manager; and with Unit Rig and Equipment Co. as Sales Manager. He is a native of Belton, Texas, and attended the Missouri School of Mines until he joined the Air Service in World War I.

Mr. Walton is a member of the American Society of Mining Engineers, the American Petroleum Institute, the Nomads (Tulsa Chapter), the Engineers Club, Tulsa; the Tulsa Club, the Dallas Petroleum Club, and the Shrine.

Mr. Barnes will be located in the Company's head office at Columbus, Ohio, and Mr. Putnam and Mr. Walton will be located in Ideco's Mid-Continent headquarters at Dallas, Texas.

The International Derrick & Equipment Company—whose trademark is IDECO—is one of the Dresser Industries.

Bob Cypher Joins Patterson-Ballagh

Patterson-Ballagh Corporation recently announced the association of R. W. Cypher as a Sales Engineer for their firm. He is known throughout the oil industry as "Zero," "Bob" or "Cy."

He spent his entire life in the oil business, having been born in Mannington, West Virginia, where his father was working on a wild cat well at the time. The family moved to Orcutt, California, in 1905 where they pioneered the early oil days. Later Bob worked in Taft, Fellows, South Mountain, Signal Hill and, in fact, has had some acquaintance in nearly all the fields of the United States.

Following his training at the University of California, he entered commercial business and in 1928 left the drilling phase to sell oil production equipment. From 1934 to 1939 he was Sales Manager of the Neilsen Pump Company, and later went into business for himself as a general representative acting as sales broker.

He will now represent Patterson-Ballagh throughout the state of California on their entire production line. They have taken over the production and sales of O'Neil Swabs, which he will introduce to the trade in addition to handling the Sucker Rod Wiper, Wire Line Wiper, new Well Seal and all of the other equipment designed to make production more efficient.

He will make his headquarters at the Patterson-Ballagh office and warehouse in Los Angeles.

Belyea Handle Big Assignment

Indicative of the United States Navy policy of insuring an adequate domestic petroleum supply for the future, was the moving recently by the Belyea Truck Company, of fifteen complete oil drilling rigs to the Naval Petroleum Reserve No. 1, at Elk Hills, California.

This "oil field on wheels" was transported to the Elk Hills development to begin work on the new exploration program in that area, recently authorized by Congress.

Each rig took four complete trucking units to move it from Camp Ono, to the new site where they will be used to explore the six and seven thousand foot levels in the hitherto undeveloped portions of the reserve.

Previous drilling has been restricted to the three thousand foot shallow strata, and the new rigs will allow officials of the Navy and Standard of California, joint developers of the area to ascertain the future potential of the district.

Rd. Mountain Well Cores Sand Measure

La Suna Oil Company, Hancock No. 2 on sec. 12-28s-28e is standing cemented with 7-in. casing set at 1998 feet. The well was cored to 2032 ft. in oil sand.

THIS LAUGH

OFF!!

"Do you know that when I go to heaven I'm going to tell Bill Shakespeare that I don't believe he wrote all those plays."

"Ah, but suppose that he doesn't happen to be in heaven?"

"In that case you can tell him."

Cop: "Who was driving when this accident happened?"

Drunk: "No one, we were all sitting in the back seat."

Mother to Susie: "Why is your right shoe muddy and not your left?"

Susie: "I changed my mind."

Little bank roll, ere we part
Let me hug you to my heart;
All the year I've clung to you—
I've been faithful, you've been true
Little bank roll, in a day
You and I will go away
To a gay and festive spot—
I'll come back, but you will not.

One afternon a big wolf in a dark forest met a little girl carrying a basket of food. "Are you carrying that basket to your grandmother?" asked the wolf. The little girl said yes, she was. So the wolf asked where her grandmother lived and the little girl told him and he disappeared into the wood.

When the little girl reached her grandmother's house she saw somebody in bed with a nightcap and nightgown on. She had approached no nearer than 25 feet when she saw that it was not her grandmother but the wolf, for even in a nightcap a wolf does not look any more like your grandmother than the Metro-Goldwyn lion looks like Calvin Coolidge. So the little girl took an automatic out of her basket and shot the wolf dead.

Moral: It is not so easy to fool little girls nowadays as it used to be.

Mary and her boy friend had had a lot of cocktails before he took her home. He told her good night and left and Mary went to bed. After a while she looked up and saw that the ceiling was going round and round. But she just laughed, because she knew that the ceiling was plastered.

"Tell me," said the inquiring reporter, "have you ever realized any of your childhood ambitions?"

"That I have," replied the business tycoon. "When I was a kid and my mother used to comb my hair, I often wished I didn't have any."

Mistress: "Well, Katrinka, do you like American doctors as well as you did those in Germany?"

Maid: "Oh, sure—and efen better yet. He didn't sharge me nothing!"

Mistress: "Charged you nothing! How was that, I wonder?"

Maid: "I vouldn't know, Ma'am. All I know is dot ven he vanted me to say 'yah,' I said it."

A big truck was wedged tightly under a low bridge. All the town's equipment had been called upon, and many hours of labor used, but to no avail. Then little Johnnie approached the chief engineer and said: "I know how to free your truck." "O.K., smart Boy Scout—how would you handle the deal?" he was asked. "Just let the air out of the tires," lisped the lad.

Triumphantly the new bride placed the dessert on the table. It was an oval shaped piece of covered pastry about 18 inches long and 6 inches wide.

"What is it?" her husband inquired.

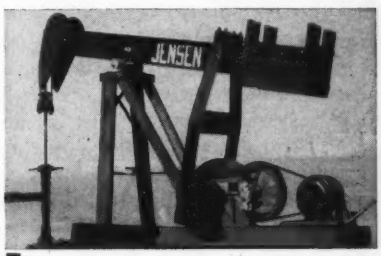
"Why, darling, can't you see? It's a pie."

"Rather long for a pie, isn't it?"

"Of course not, silly. It's rhubarb."

Teacher: "What binds us together, sustains us, shapes our ends, and makes us better than nature intended?"

Betty: "Girdles."



Why the JENSEN Unit is so good

The best way for us to tell you about the JENSEN Pumping Unit is to say that we concentrate our technical knowledge and experience on giving producers exactly what they want. That policy is now more than 25 years old. Any JENSEN equipped well is likely to be more profitable and satisfactory, but the credit is due to producers who insist on making more money and having less trouble.

You will find such a wealth of applied practical experience only in the JENSEN Pumping unit, and what you find will interest you greatly. Investigate any way you wish but—INVESTIGATE!

California Representative:
A. V. TURNER
445 W. 6th, Downey, Calif.
Phone: Topaz 2-2410

Stocked by
THE OIL TOOL CORPORATION
3075 Cherry Avenue, Long Beach, Cal.
Phone 481-81

JENSEN
BROTHERS MFG. CO.
Coffeyville, Kansas, U.S.A.

EXPORT OFFICE: 50 Church St., New York City

Huge Construction Program Announced by Standard

Plans for a construction program totaling more than $20,000,000 were announced recently by H. D. Collier, President of Standard of California.

This program, suspended by the war, will include additions and improvements to refinery, storage, distributing, producing and office facilities of Standard and its domestic subsidiaries.

In addition, the company is expanding its tanker fleet at a cost which will approximate $13,000,000 by the middle of next year, and is furthering its plans for drilling and exploration work and for additional expansions expected to develop in the next two years.

"The program," Collier said, "also covers warehousing and shipping installations, new laboratories to keep Standard in the forefront of petroleum technological advances, and modernization of marketing and service station facilities throughout the West."

The largest part of these delayed expenditures will be at the Richmond and El Segundo (Calif.) refineries, where approximately $15,000,000 will be expended. Included in this latter amount is nearly $2,000,000 for expansion of the Richmond laboratories and plants of California Research Corporation, Standard subsidiary.

Indicating the additional large outlays Standard has in mind, Collier declared:

"We anticipate spending many more millions for normal replacements, repairs and betterments during the next few years.

"Our domestic drilling and exploration program will be continued to uncover new sources of petroleum. While drilling, for instance, may not be maintained at its wartime pace, it still will be one of our largest expense items, requiring substantial manpower and equipment. It might be explained that Standard spent more than $100,000,000 in drilling and exploration work in the past two years.

"Our affiliated and subsidiary companies also are planning energetic programs in the foreign field—Saudi Arabia, Bahrein Island, Netherlands East Indies, Venezuela, Colombia, Alberta (Canada), and elsewhere. These operations, covering exploration, drilling, refinery construction and shipping facilities, will entail additional expenditures of many millions of dollars. A large part of these outlays will be for equipment which will be bought in the United States."

Brown-Bevis in Postwar Stride

Deliveries of many post-war machines are already being made by the Brown-Bevis Equipment Co., 4900 Santa Fe Ave., Los Angeles. At a time when automotive and household appliance manufacturers are "crowing" about how soon they will be able to supply their customers, Brown-Bevis is already delivering heavy equipment to Los Angeles users.

One big reason deliveries are being made for Brown-Bevis customers is that this company has determined to let no private priorities prevent shipment of machines to the West Coast, according to Charles M. Weinberg, President.

Just Say---

YES! You may send me the CALIFORNIA OIL WORLD for one year, for which I enclose $1.00.

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Address .....

City ..... State .....

Position ..... Company .....

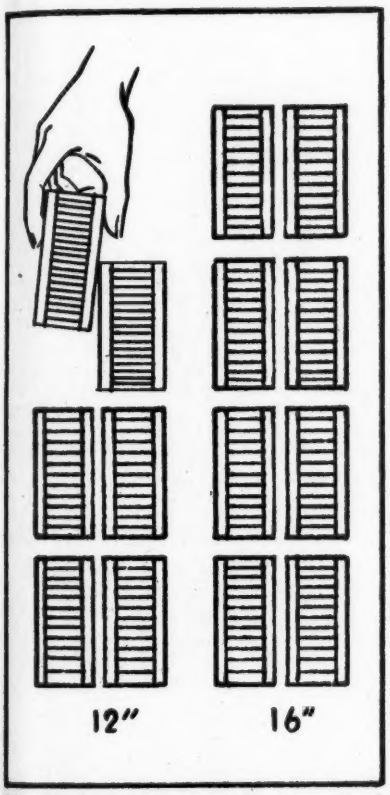
Check branch engaged in Producing..... Refining..... Natural Gasoline..... Marketing..... Manufacturing.....

Subscriptions accepted only from persons actively connected with the oil industry.

California Oil World, 117 West 9th St., Los Angeles 15, Calif.

Baash-Ross "DU" Unitized Slips

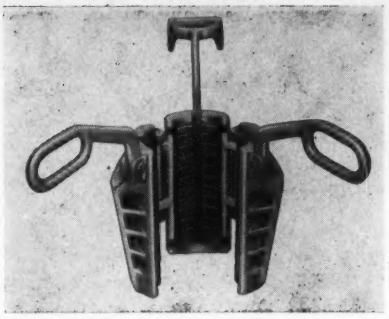
For many years operators have been seeking rotary slips in which maintenance and spare parts inventory is reduced to a minimum. The Baash-Ross "DU" Unitized Slips made an important contribution in this direction when they were designed so that the same body would fit a wide range of pipe sizes by simply changing the liners. This eliminated need for carrying a separate body to fit each size of pipe used on a drilling rig, greatly simplifying change-over operations and minimizing inventory needs.



Showing how liner segments are arranged to make 12 inch (left) and 16 inch (right) length liners.

Short Liners Are Interchangeable

Baash-Ross "DU" Slips now incorporate still another advancement that both simplifies inventory requirements and permits longer liner life to be obtained. Instead of the liners being made in full length sizes to fit the 12 inch and 16 inch bodies in which Baash-Ross Slips are available, the liners are now made in short 4 inch segments which are locked into the bodies the same



"DU" Rotary Slips, showing how liner segments make complete full length liners when installed.

as the longer lengths and give the same rigid grip. With these new 4 inch slips it is no longer necessary for an operator to stock supplies of both 12 inch and 16 inch liners. He merely stocks a supply of 4 inch liners, using three of these 4 inch segments to make up a 12 inch liner, and four to make up a 16 inch liner.

Besides greatly simplifying inventory requirements, this new advancement also lengthens the life of the slips by making it possible to change only the worn sections while re-using for further service any slip segments that are only partially worn. Where the master bushing is out of line or the pipe hangs against one side of the hole, the bottom portion of the liner will often show greater wear than the top portion. With conventional full length liners it is necessary to replace the entire liner even though only part of its gripping area may be worn. However, with the new short Baash-Ross liner segments, it is only necessary to replace those segments which are worn and leave the unworn segments in the body for further service. This, of course, reduces liner replacement costs to a minimum.

For further information write the Baash-Ross Tool Company direct at 5512 Boyle Avenue, Los Angeles 11, California.

Calco Make Index Available

Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J. announces the release for distribution of an Index to Calco Technical Bulletins. They state: "The increasing number of inquiries for our technical bulletins has indicated a need for a reference index to the valuable material contained in the numerous bulletins issued to date. A short abstract of the subject matter of each bulletin has been prepared to provide the reader with a key to the information contained in the various bulletins. And since the work of our Research and Technical Service Laboratories has been conducted in many industrial fields having totally unrelated products and problems, it seemed advisable to list the different bulletins with their abstract under the product materials or the subject they treat upon."

The Calco Technical Bulletins have enjoyed a wide popularity in the technical and scientific circles where interest is primarily devoted to the study of textiles, leather, paper, plastics, printing inks and paints, and in fact wherever color is used.

A copy of "Index to Calco Technical Bulletins" issued under Calco Technical Bulletin No. 761 may be obtained from your Calco representative or by writing the Advertising Department, Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J.

Horizontal Holes

(Continued from Page 13)

During the drilling of the horizontal holes the actual drilling speed averaged more than 1 ft. per minute. In drilling with one bit, for example, a distance of 28 ft. was drilled in 11 minutes and during part of this time there were gas showings strong enough to cause the mud fluid to froth.

When the well was put on production it started making approximately 10 bbl. of oil per day. After three weeks the production had risen to more than 20 bbls. per day. A considerable amount of sand was produced with the oil but this decreased as the volume of oil increased.

*The method and equipment used for horizontal drilling were invented and developed by John A. Zublin of Universal Engineering Co., Ltd., of Los Angeles.

BUY VICTORY BONDS

September Meeting Junior AIME Southern California Section

Mr. Munson began the prepared program with a discussion of emulsions. The principal components of emulsions are water and oil. Under water is included all water solutions and water missible materials. Similarly, under oil is included all oil missible materials. When these two components are mixed with no other material present, they are unstable. A third, emulsifying component, determines the stability and the type of emulsion—type being either water in oil or oil in water. The emulsifying component is some type of polar body which is attracted to droplets of water, forming a more or less rigid film about them and preventing coalescence. Emulsions may occur in water-oil mixtures of any proportion. The test for a type of emulsion is its missibility in the same component—for example, a water in oil emulsion will mix readily and disperse in oil, but not in water. The stability of an emulsion is a function of the length of time after forming. Therefore, early treatment of emulsions, at the wellhead if possible, is advantageous. Fine solids, i.e., drilling mud, silt, etc., increase the stability of emulsions. Temperature has a destabilizing effect on emulsions which is very critical in some cases; however, the importance of heat in treating emulsions is declining.

Treatment of emulsions by chemicals is aimed at breaking down the film around the small droplets. No one agent will fit all cases. Many hundreds of chemicals have been tried but the obsolescence rate is high. There are now approximately 150 chemicals on the market, only a few of which were in use five years ago. On the average about one part agent to 10,000 parts of recovered oil is required. Reverse emulsions or oil in water emulsions are usually found where the formation water is fresh and alkaline and where the oil is low gravity. They are extremely stable. Usually the amount of oil present is not worth recovering but the water must be treated to prevent contamination of streams and farm lands.

Mr. Pettefer discussed the electrical method of dehydration. When an emulsion of water and oil is placed in an electric field, the droplets tend to line up and elongate. Adjacent ends have electrical charges of opposite sign and are under considerable strain; therefore, they tend to be drawn together and coalesce. Coalescence takes place in 1/1000 of a second, therefore it makes no difference whether alternating current or direct current is used. After coalescence, the drop separates out by gravity. In general, with heavy oil a low oil velocity past the electrodes is used and with light oil high velocity is used.

The diagram and layout of several typical dehydration plants was discussed by Mr. Gregory. Several questions must be answered by the designer before laying out the plan. These are: How clean must the oil be? Will field dehydration change the oil to a different price bracket if royalties are based on the wet oil gravity? How much heat is necessary? Will the high temperatures result in loss of light fractions if there is no vapor recovery equipment? Is it more economical to use lead line dehydration or a batch system? In some locations it is possible to use wash tanks and then treat emulsions which accumulate at the bottom of the storage tanks. This proves more economical than treating all of the oil. In practically every case it is well to avoid emulsions rather than to treat them. This means keeping pumps in good condition, using reciprocal pumps rather than centrifugal pumps, using lifting methods which do not create stable emulsions.

After the prepared program several questions were discussed. If the temperature is too high, water which is present in the emulsion may form steam which increases the stability. Multiemulsions such as oil in water in oil can frequently be treated using two different chemicals injected at different places in the flow line. The cost of treating oil normally varies between 0.2c per barrel to 4c per barrel. When the voltage is too low in the electric dehydrator, poor separation is the result. If it is too high, water may be dispersed. In some cases dispersion may be violent enough to cause inverse emulsions resulting in bleeding of brown water from the electric dehydrator. The range of voltage gradient in use is between 2,000 to 8,000 volts per inch.

Chain Belt Issue New Bulletin

A new bulletin on Rex and Baldwin-Rex Oil Field Products has just been released by the Chain Belt Company of Milwaukee. Its 12 pages contain descriptive matter, specifications, prices, and photos. Price lists, strengths and dimensions are given. One section of the booklet is devoted to tips on the care of chain, and another on the line of Rex Oil Field Pumps. Write for bulletin No. 455, Chain Belt Company, Milwaukee 4, Wisconsin.

Dr. Stock Addresses American Association of Petroleum Geologists Pacific Section

Speaking before the Pacific Section of the American Association of Petroleum Geologists at the University Club on Friday, Oct. 12th, Dr. Chester Stock, Professor of Paleontology at the California Institute of Technology, told of the recent discovery of the remains of an unusually large and diversified collection of prehistoric animals dating from the Ice Age in a large cave in the high mountain country of southern Nuevo Leon in Mexico.

The discovery of the cave was the result of recent paleontological explorations in Mexico by the California Institute of Technology and was made near the village of San Josecito at an elevation of 7100 feet above sea level.

"The occurrence is noteworthy," Dr. Stock pointed out, "because of the unusually large and diversified assemblage of mammals and birds, all to be found in the same cave in seventy feet of deposits." Extinct ground sloths, horses, four-horned antelopes and large deer are common, while among the birds are found many flesh-eaters like the condors, vultures and eagles of today.

Many of the animal remains show interesting relationships to the skeletons found in the brea pits of Hancock Park in Los Angeles and furnish information as to the climatic conditions and distribution of organisms during this epoch in America.